

KIC 011013201

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
011013201-01	OBS	0972.01	13.118960	143.469155	361.4	4.503	182.4	180.2	4.24	7221	9.23	2313.81
011013201-02	OBS	0972.02	7.821900	139.141032	31.9	4.715	20.9	21.5	4.24	7221	2.86	4610.82
011013201-03	OBS	No	0.677303	132.007600	4.5	6.989	11.1	10.8	4.24	7221	0.92	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011013201-01	OBS	PC	0.63	0	0	0	0	CENT_SATURATED
011013201-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—CENT_SATURATED
011013201-03	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

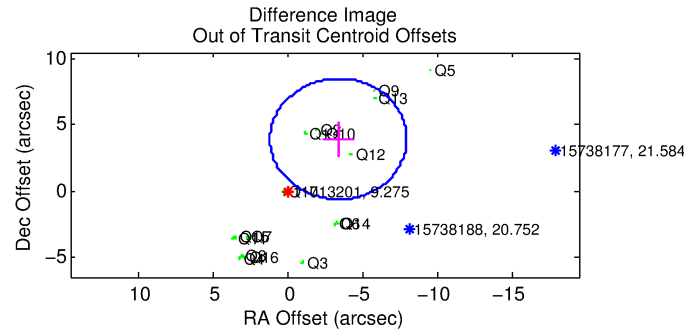
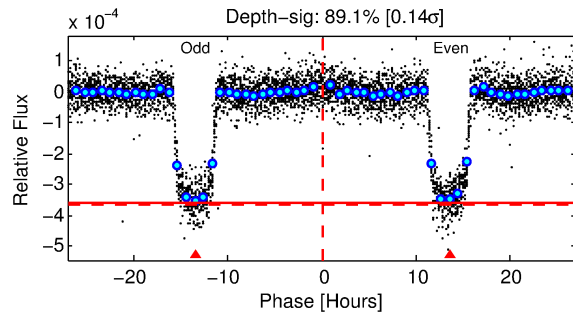
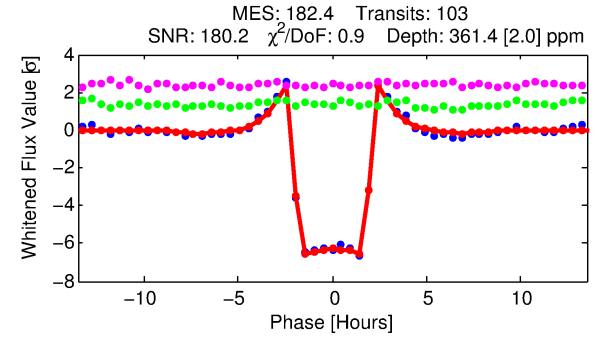
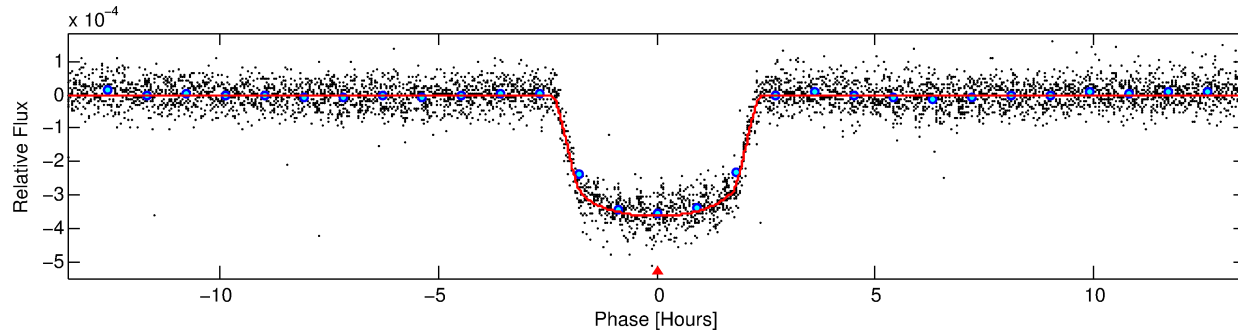
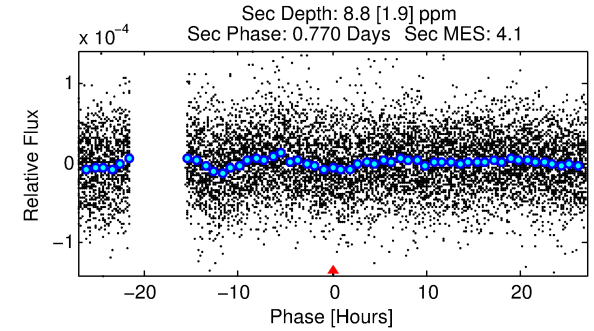
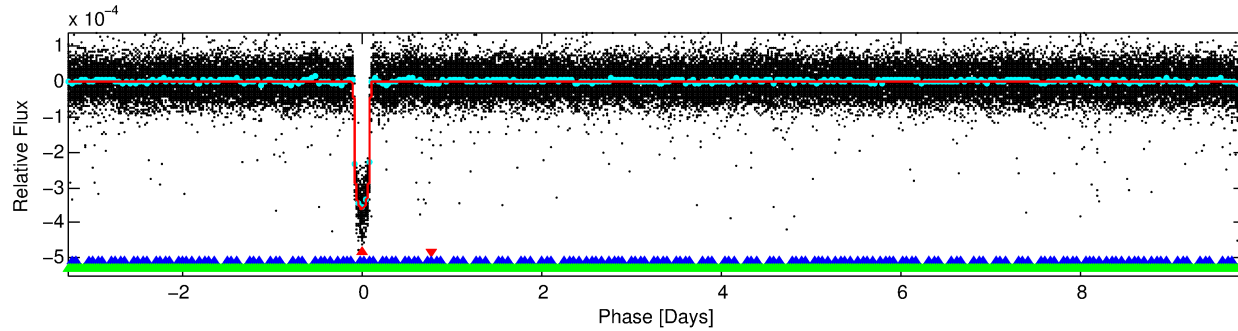
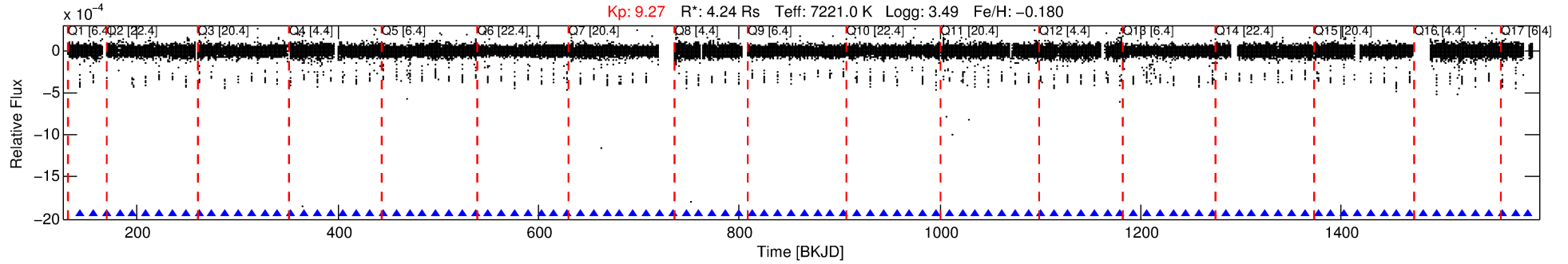
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011013201-01

No Significant Match Found

DV One-Page Summary

KIC: 11013201 Candidate: 1 of 3 Period: 13.119 d
KOI: K00972.01 Corr: 0.978



DV Fit Results:

Period = 13.11896 [0.00001] d
Epoch = 143.4692 [0.0003] BKJD
Rp/R* = 0.0199 [0.0002]
a/R* = 12.13 [0.72]
b = 0.86 [0.02]
Seff = 2313.81 [1095.26]
Teq = 1769 [209] K
Rp = 9.23 [2.80] Re
a = 0.1376 [0.0400] AU
Ag = 1.08 [0.55] [0.14σ]
Teffp = 2787 [167] K [3.80σ]

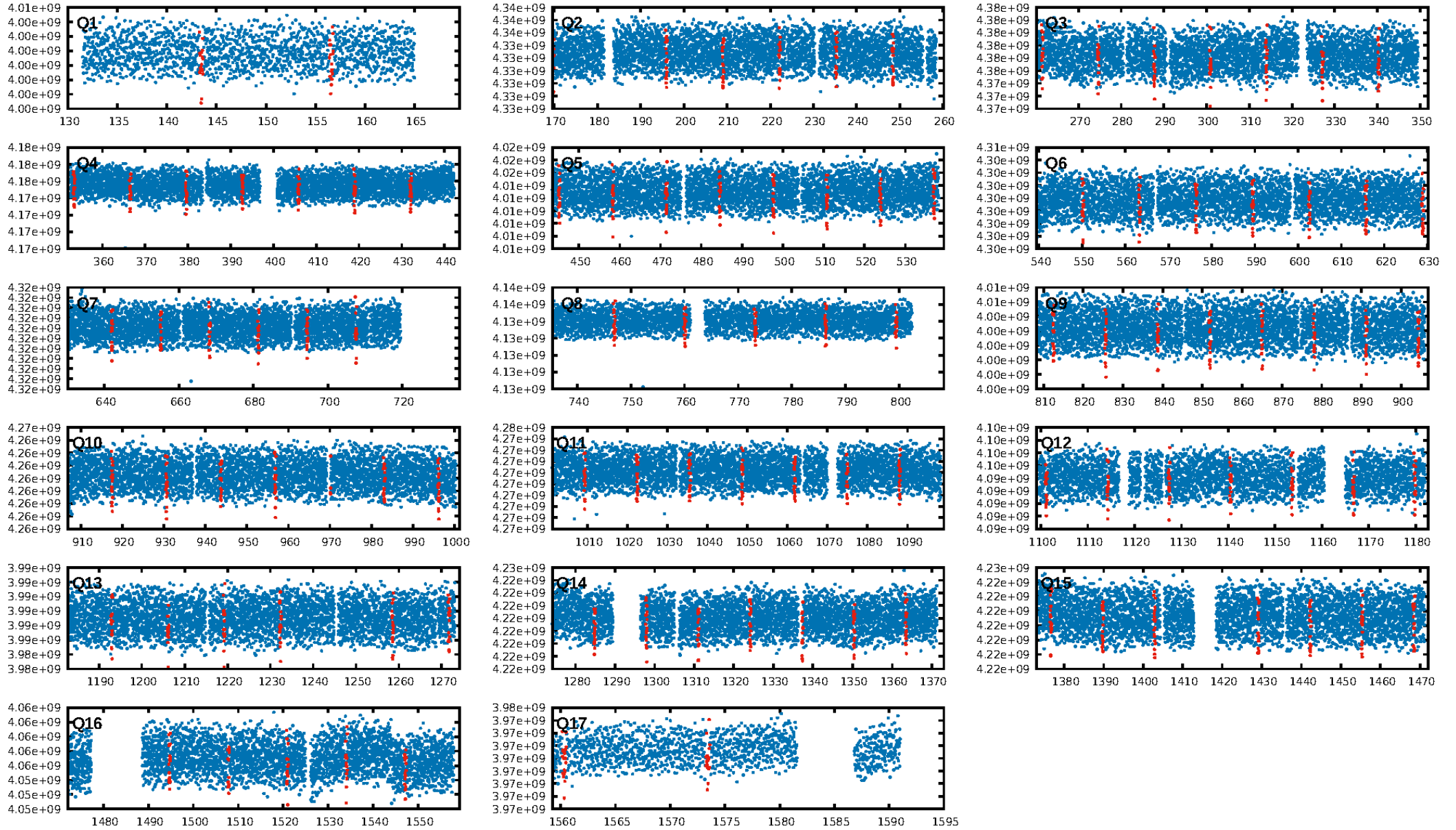
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.50σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [99/99]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.948 arcsec [7.84σ]
OotOffset-rm: 5.213 arcsec [3.42σ]
KicOffset-rm: 5.382 arcsec [4.22σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 0.00 [0/17]

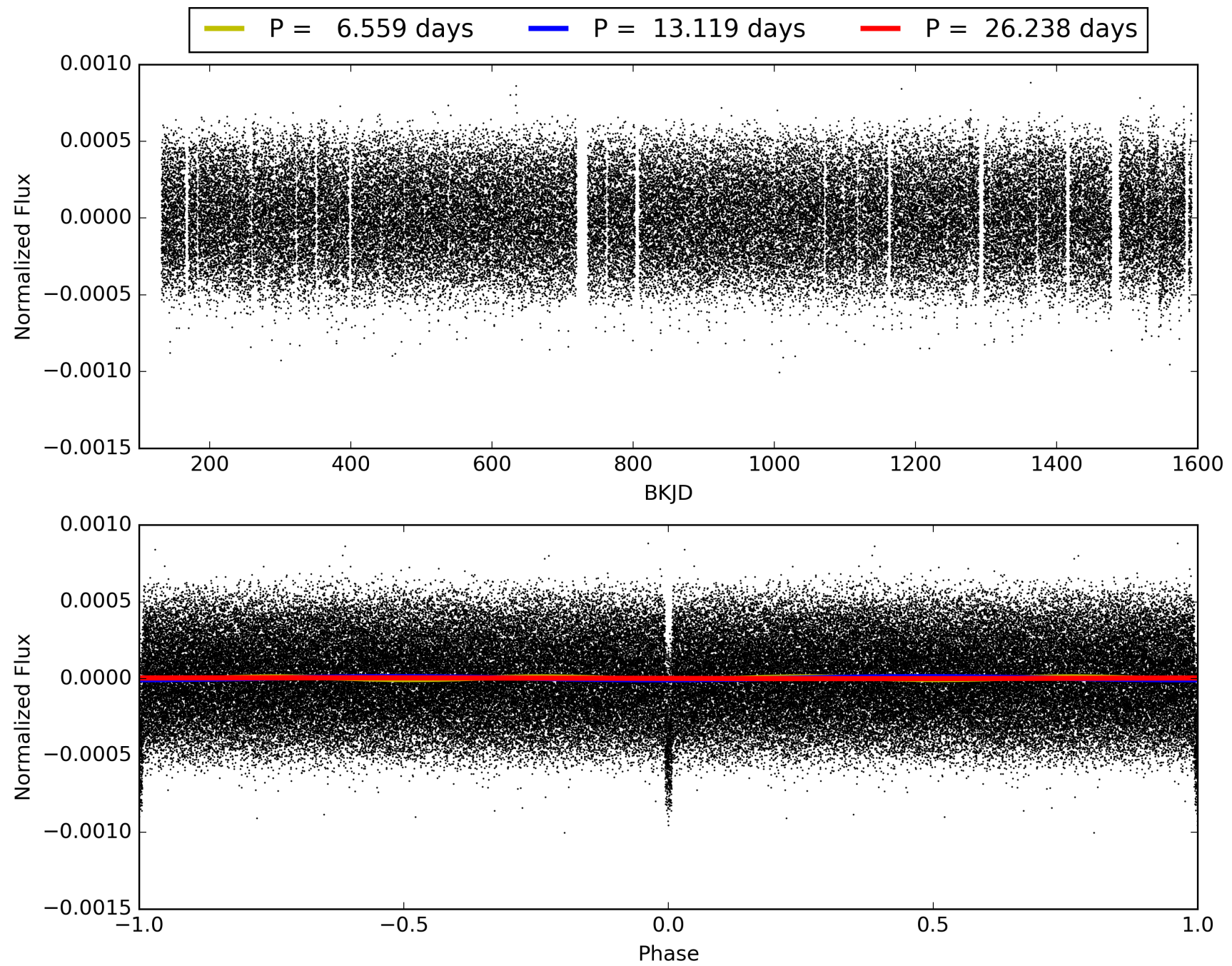
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:07:48 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011013201-01, PDC Light Curves

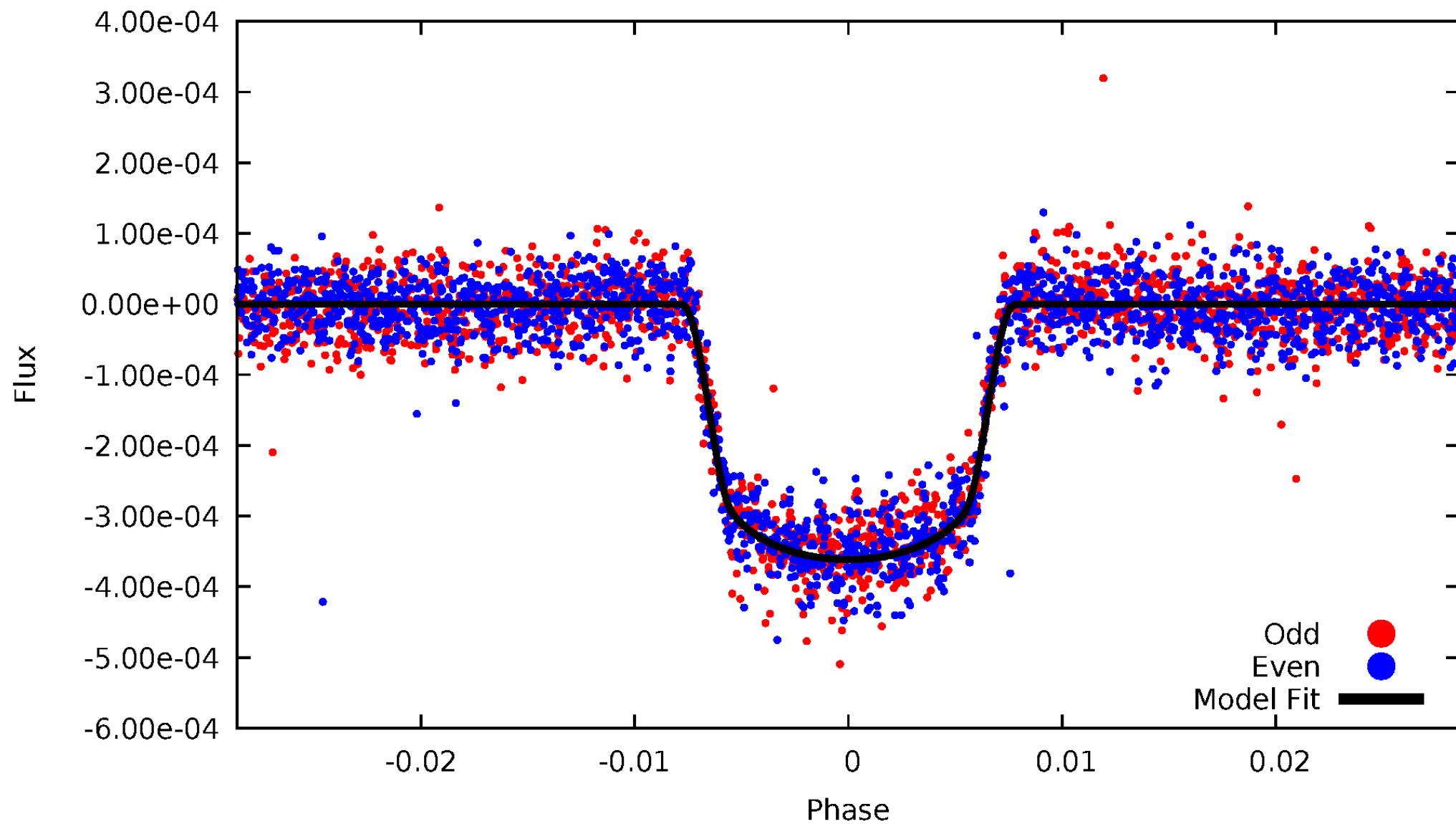


TCE 011013201-01



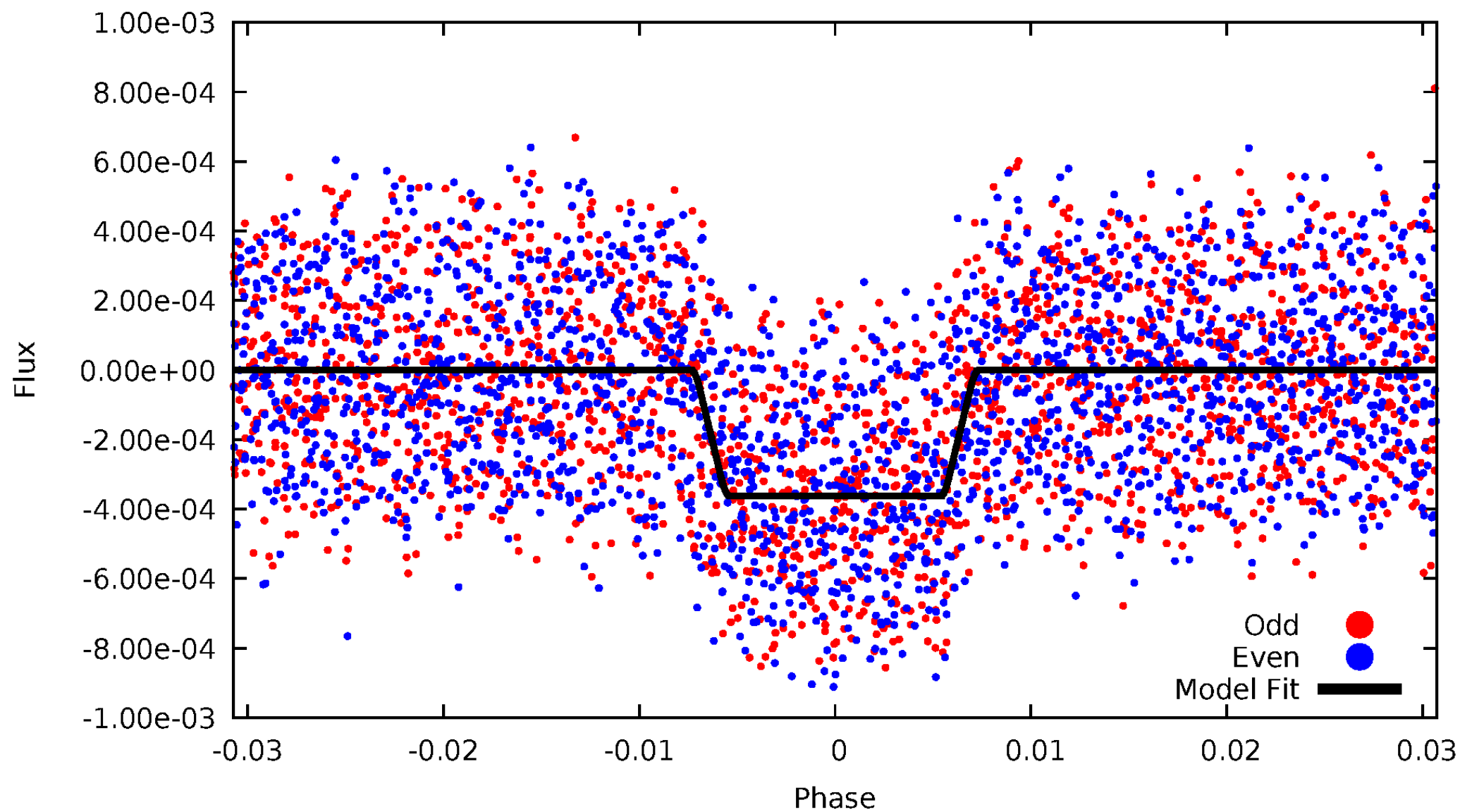
DV Odd/Even

TCE 011013201-01



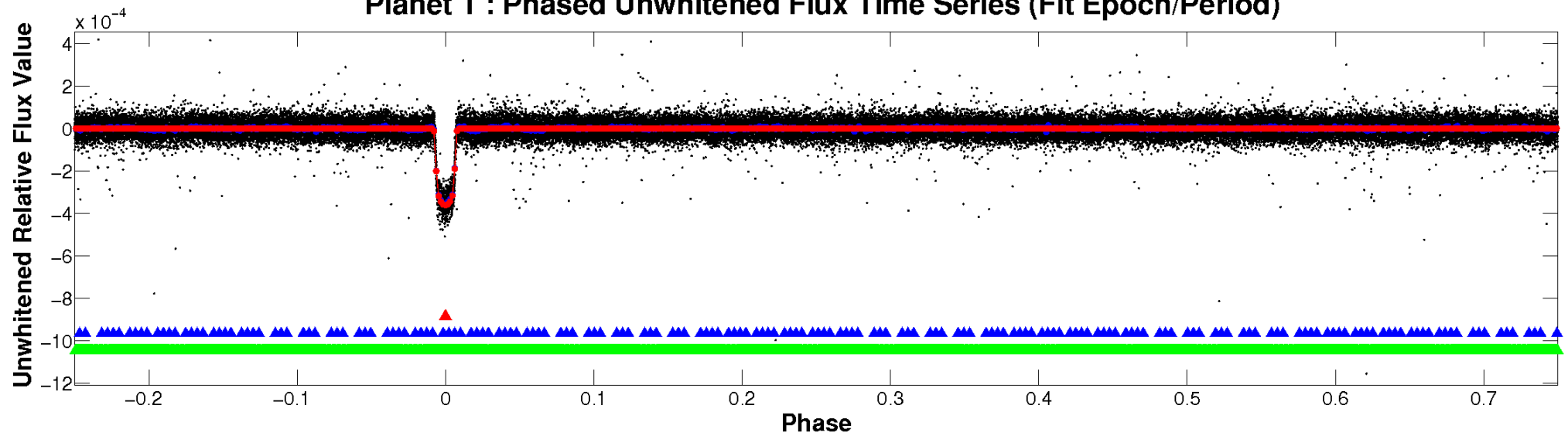
ALT Odd/Even

TCE 011013201-01

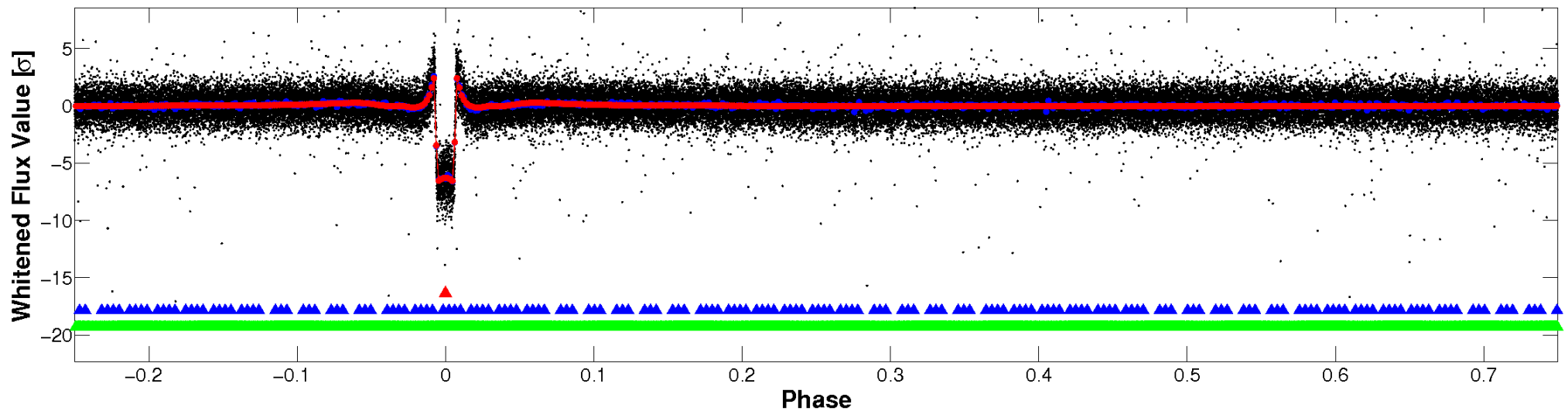


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

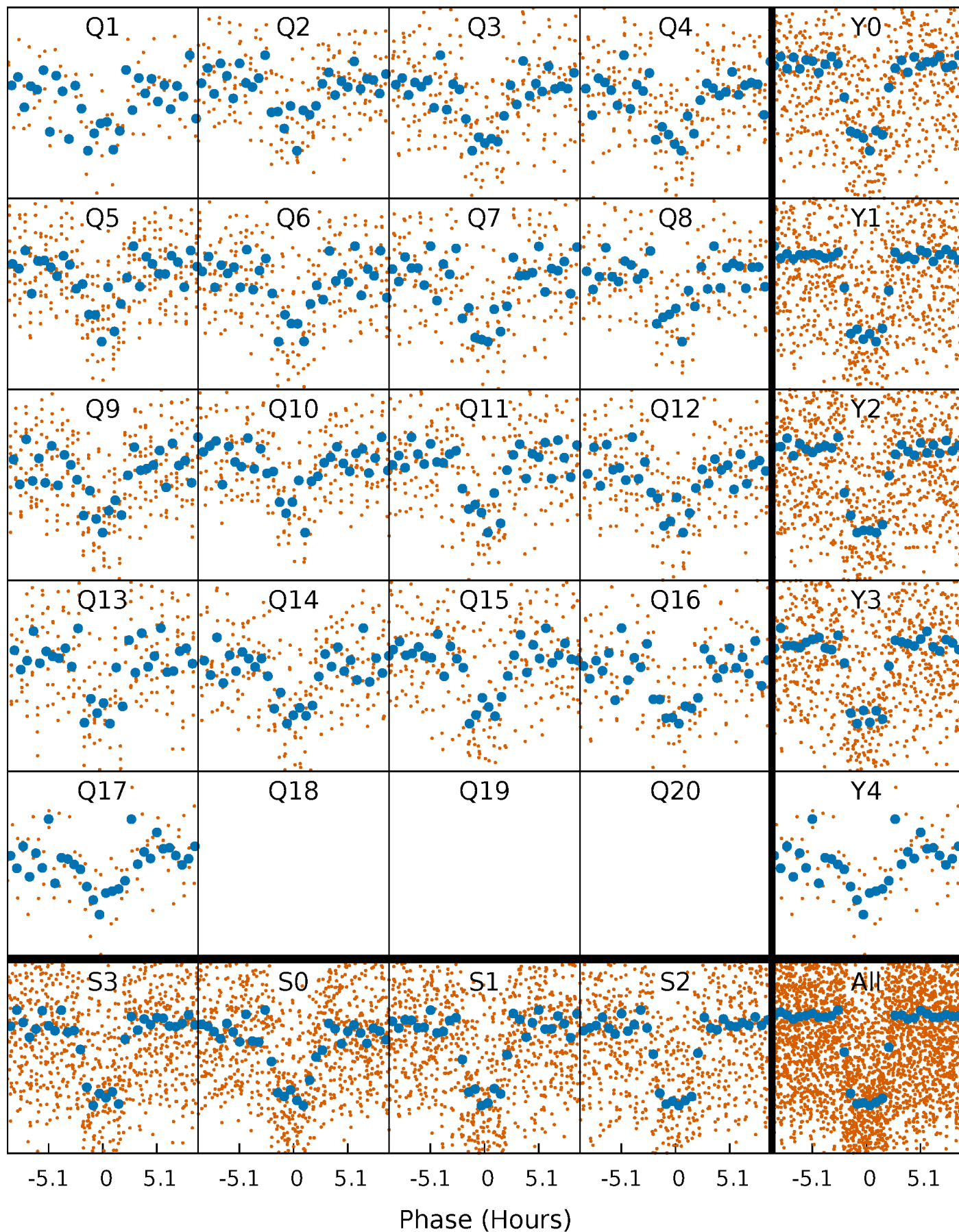


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



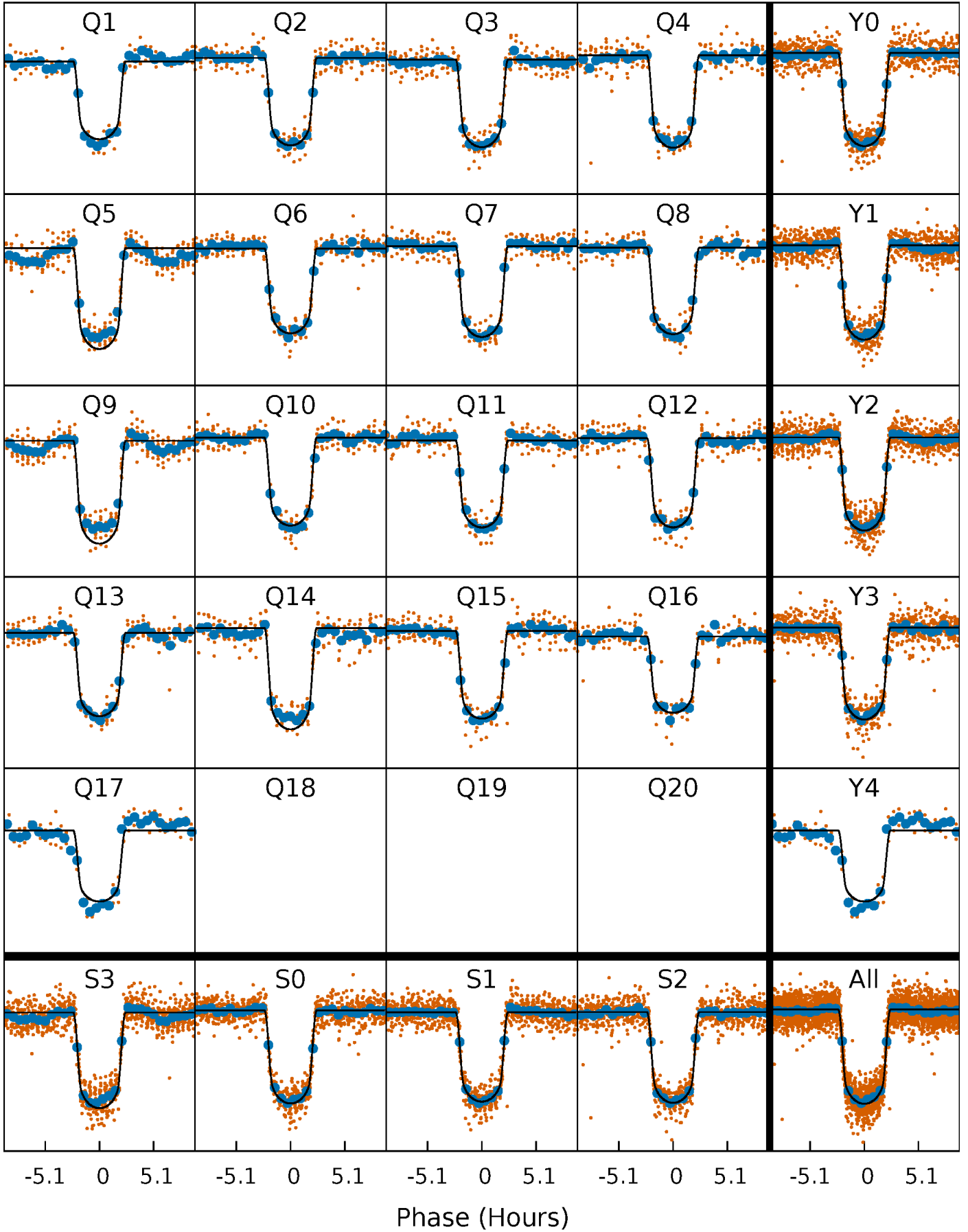
PDC Quarter-Phased Transit Curves

TCE 011013201-01 P= 13.118960 Days $T_0=143.469155$ (BKJD)



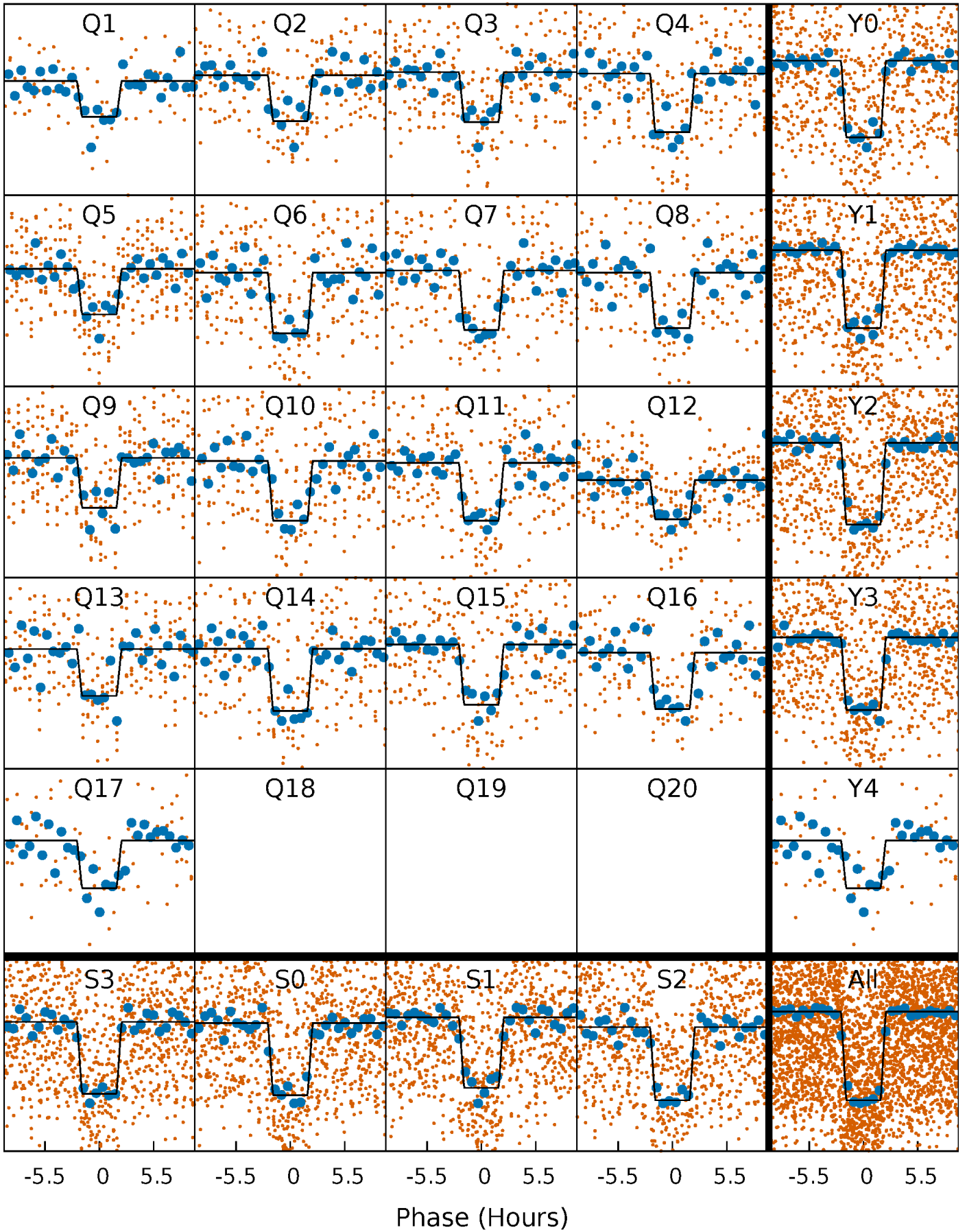
DV Quarter-Phased Transit Curves

TCE 011013201-01 P= 13.118960 Days $T_0=143.469155$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

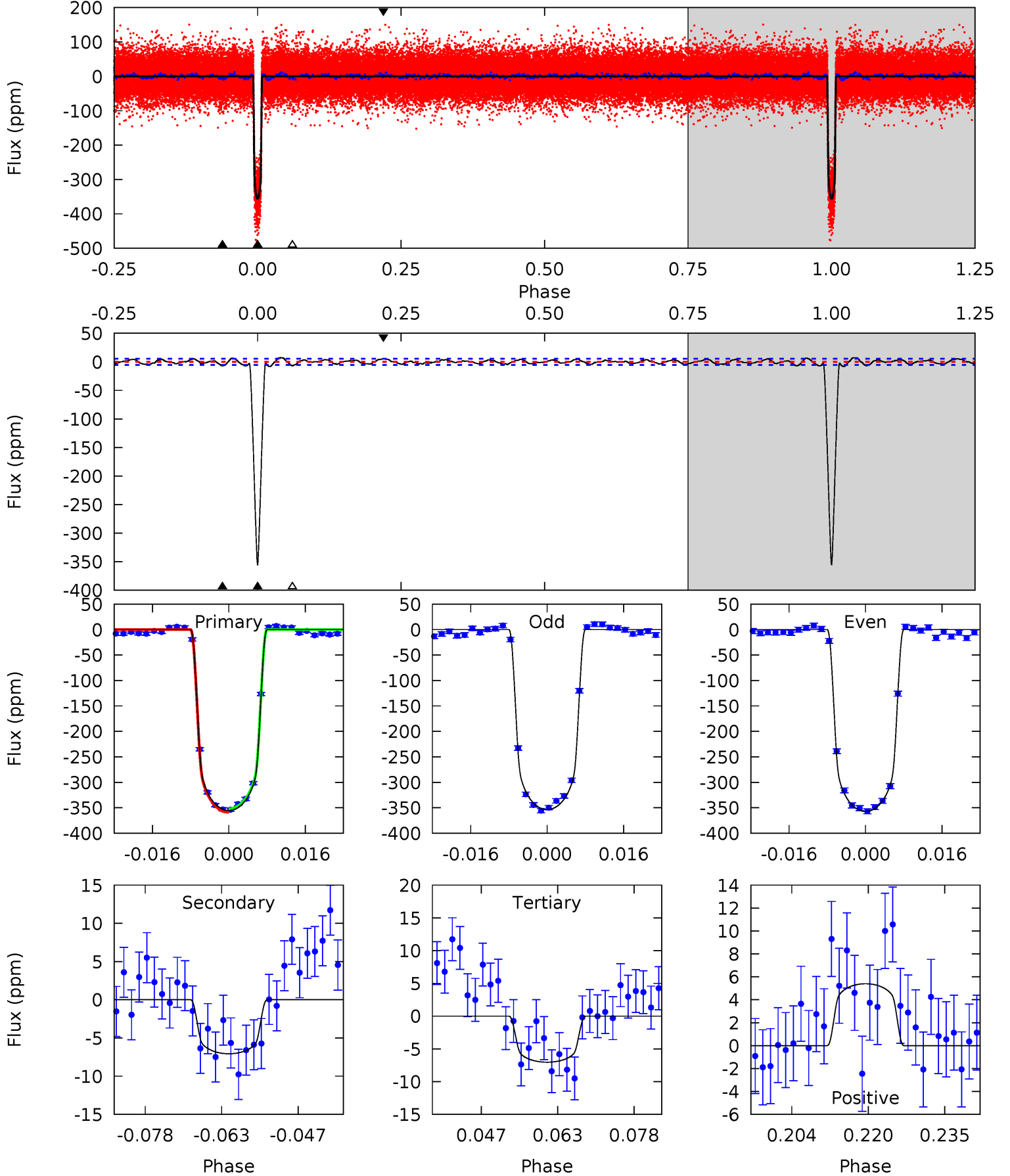
TCE 011013201-01 P= 13.118837 Days $T_0=143.475075$ (BKJD)



DV Model-Shift Uniqueness Test

011013201-01, $P = 13.118960$ Days, $E = 130.350195$ Days

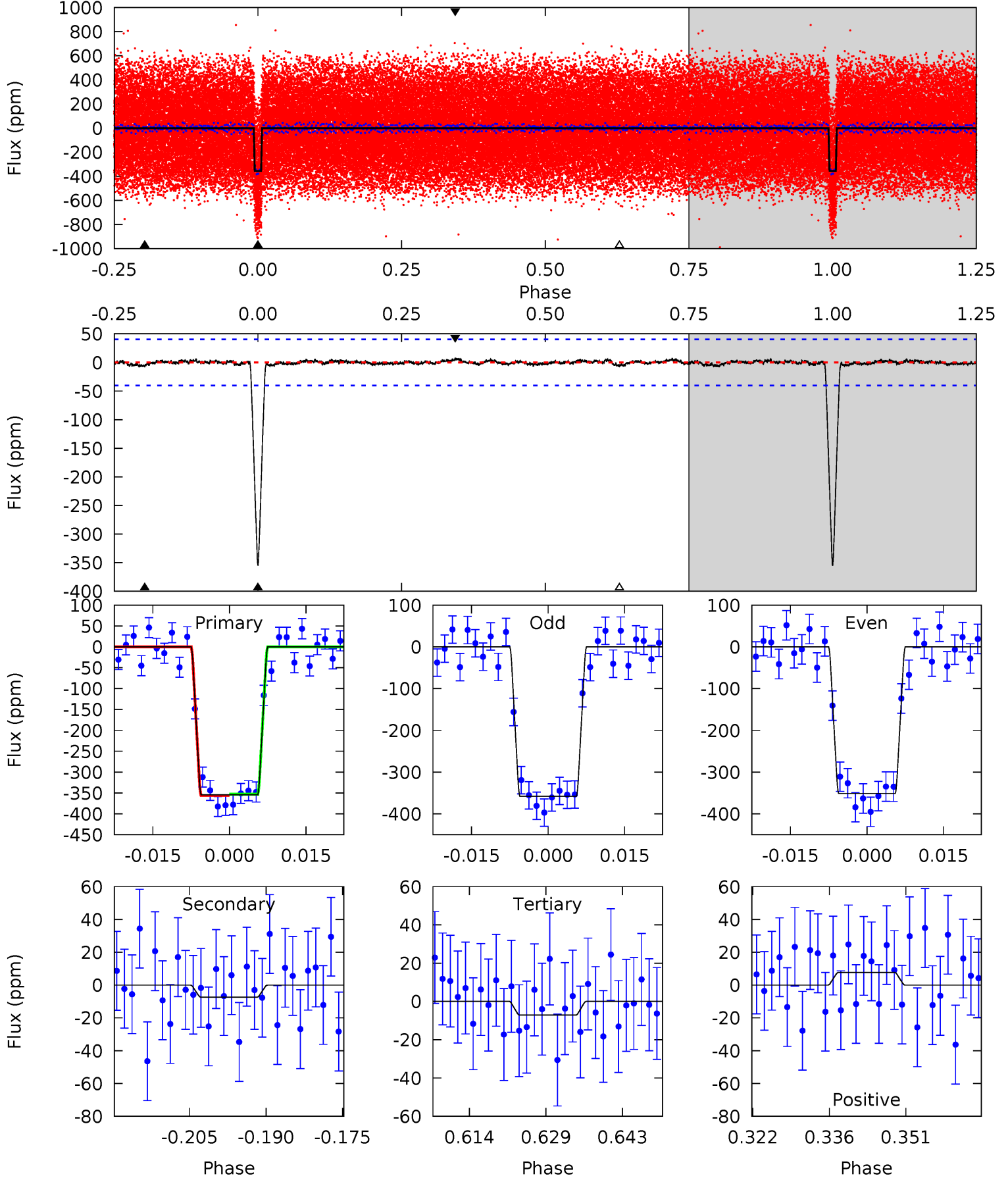
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
319.8	6.36	6.33	4.86	4.94	2.42	2.53	313.4	314.9	0.03	1.50	1.66	1.01	0.02	2.95



Alt Model-Shift Uniqueness Test

011013201-01, $P = 13.118837$ Days, $E = 130.356238$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.5	0.91	0.88	0.94	4.95	2.44	0.30	42.6	42.6	0.03	-0.04	0.42	1.00	0.02	0.19



Stellar Parameters For KIC 011013201

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7221^{+114}_{-171}	$3.488^{+0.272}_{-0.048}$	$-0.180^{+0.150}_{-0.100}$	$4.240^{+0.227}_{-1.284}$	$2.018^{+0.029}_{-0.248}$	$0.037^{+0.065}_{-0.004}$
	+2%/-2%	+8%/-1%	+83%/-56%	+5%/-30%	+1%/-12%	+174%/-11%
Source	SPE4	SPE4	SPE4	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011013201-01 / KOI 0972.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 1	$9.11^{+0.44}_{-1.52}$	2438^{+84}_{-198}	3028^{+103}_{-117}	$0.926^{+0.329}_{-0.181}$
Alt.	-7 ± 8	$8.63^{+0.45}_{-1.61}$	2430^{+86}_{-213}	3079^{+521}_{-5938}	$1.083^{+1.318}_{-1.218}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

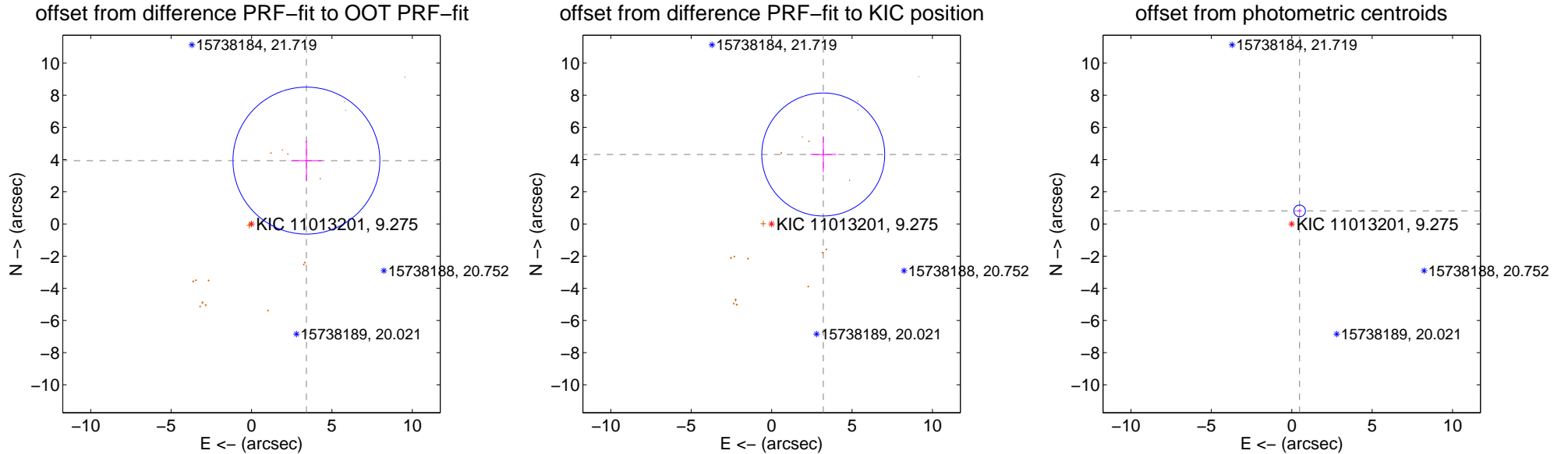
DV Centroid Data

Supplemental centroid analysis for 011013201-01. **Kepler magnitude: 9.28.** Transit SNR 180.22

There are 1 quarters with good PRF difference image offsets

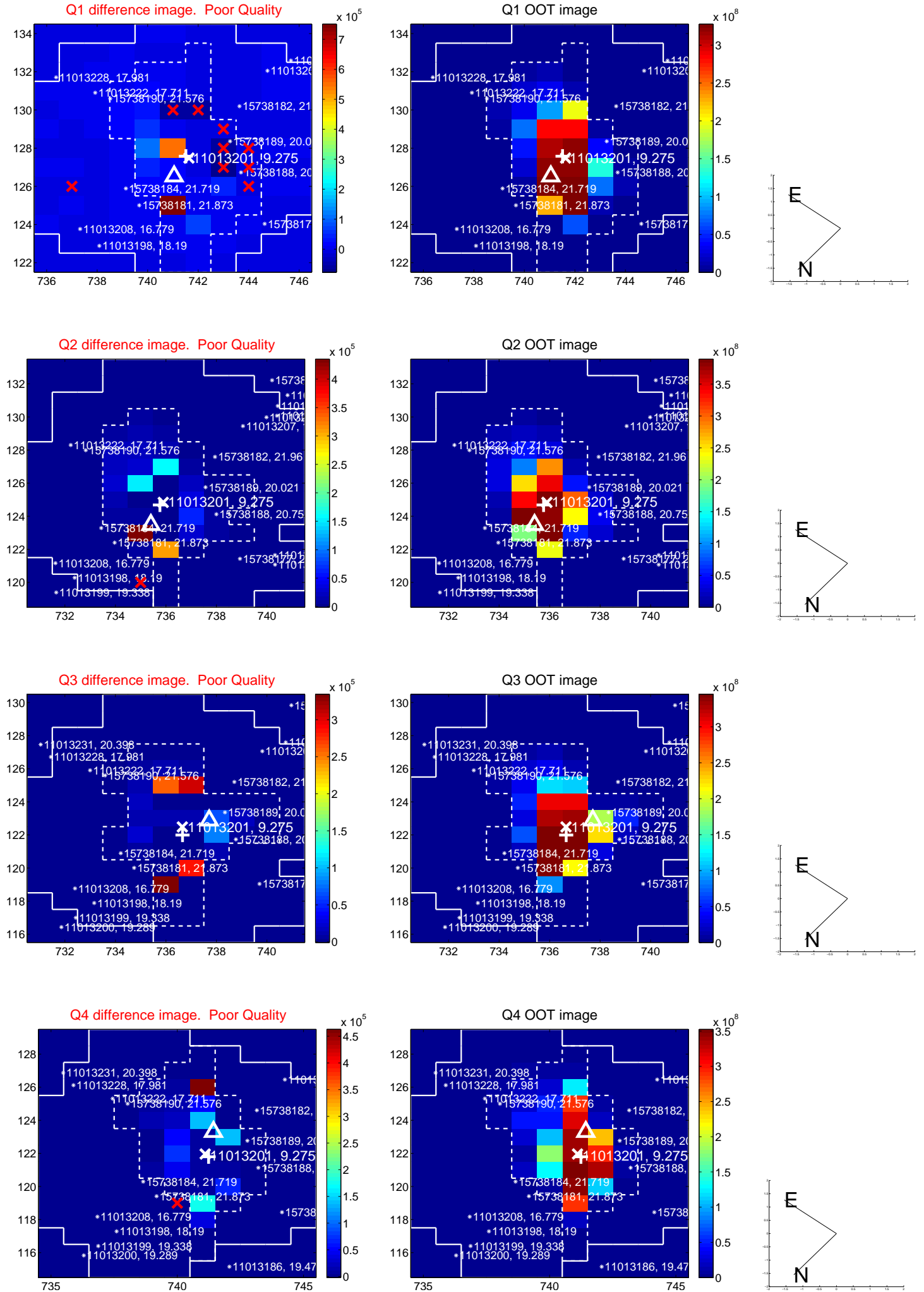
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.213 ± 1.523	3.42	-3.414 ± 0.964	3.939 ± 1.260
PRF-fit source offset from KIC position	5.382 ± 1.275	4.22	-3.212 ± 0.805	4.319 ± 1.087
photometric centroid source offset	0.95 ± 0.12	7.84	-0.49 ± 0.11	0.81 ± 0.12

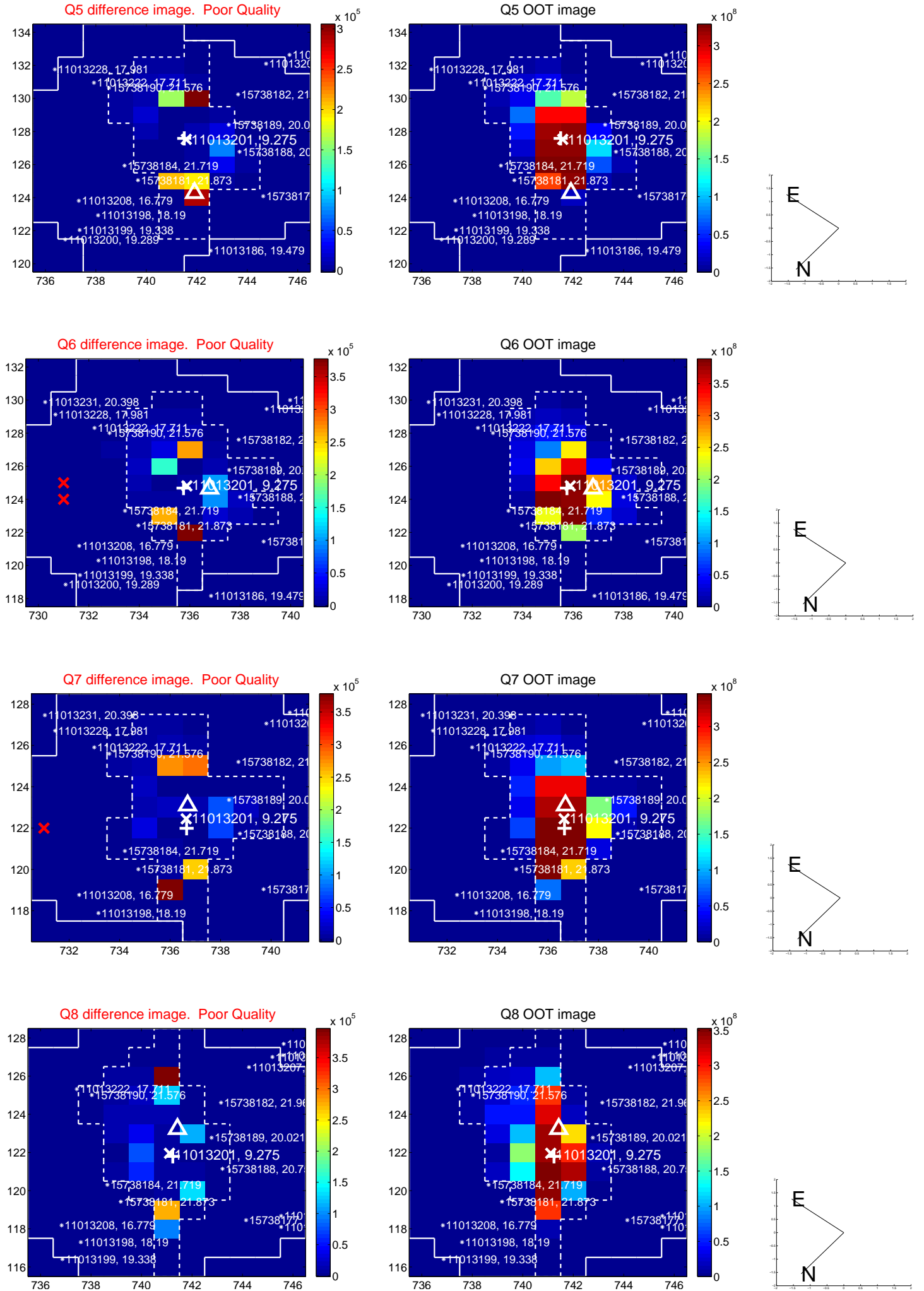


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

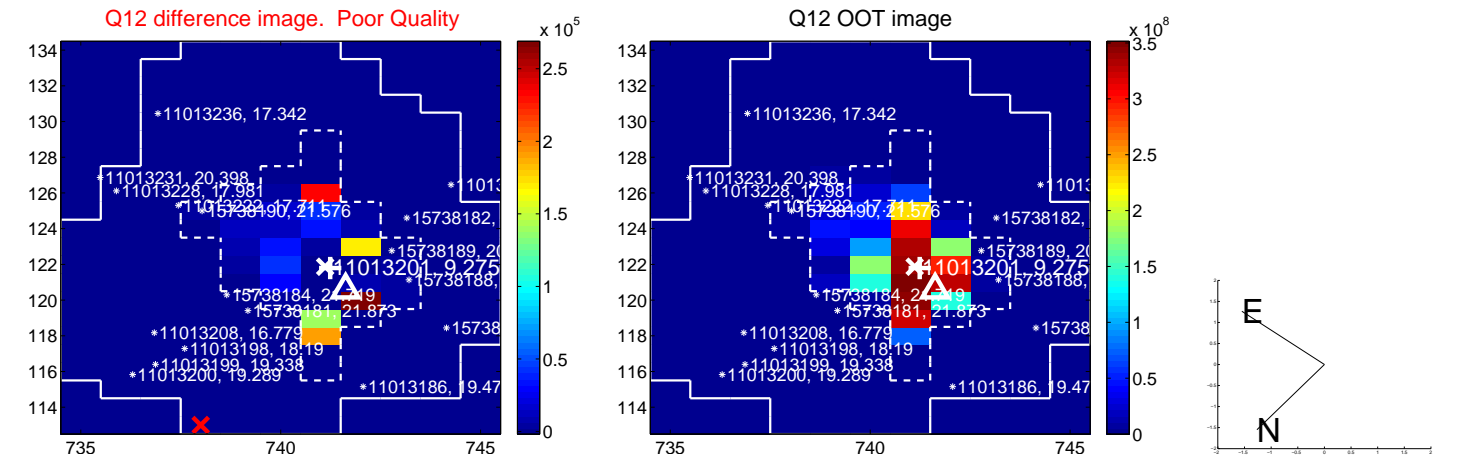
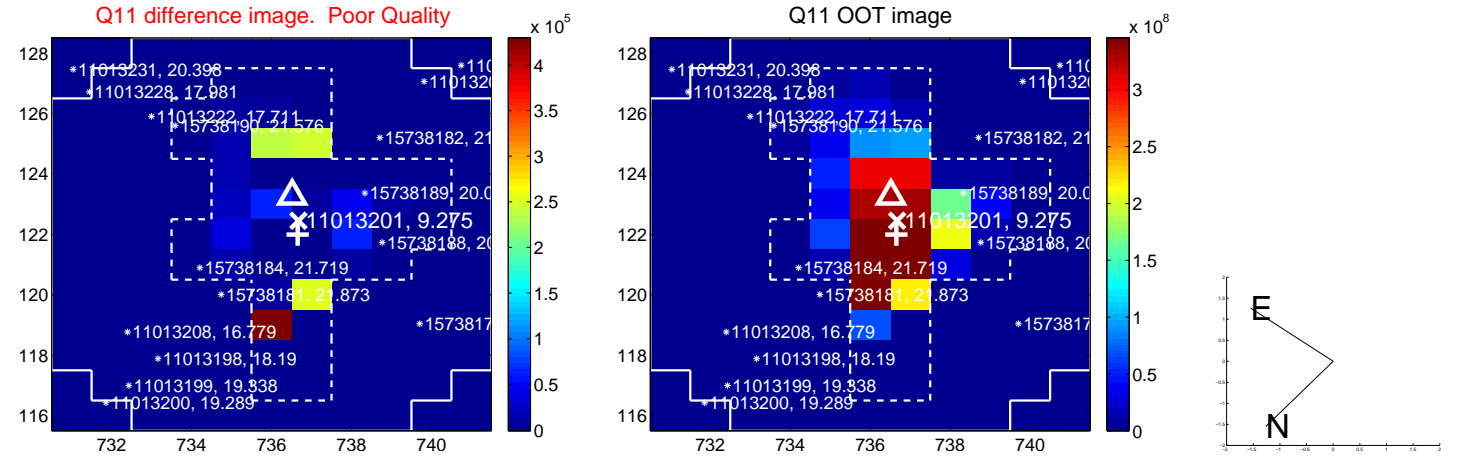
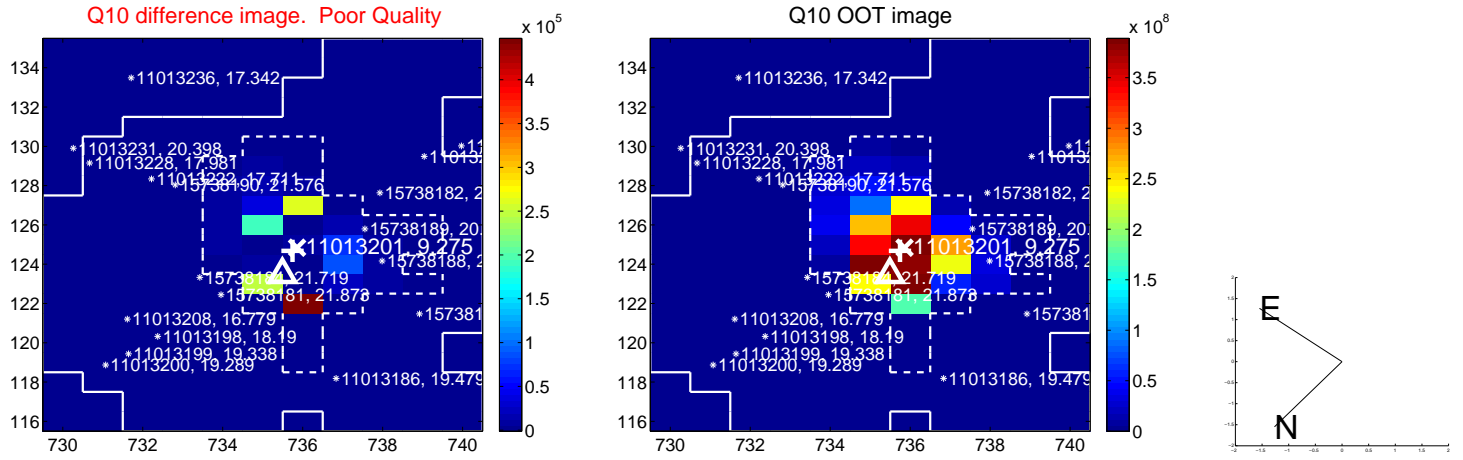
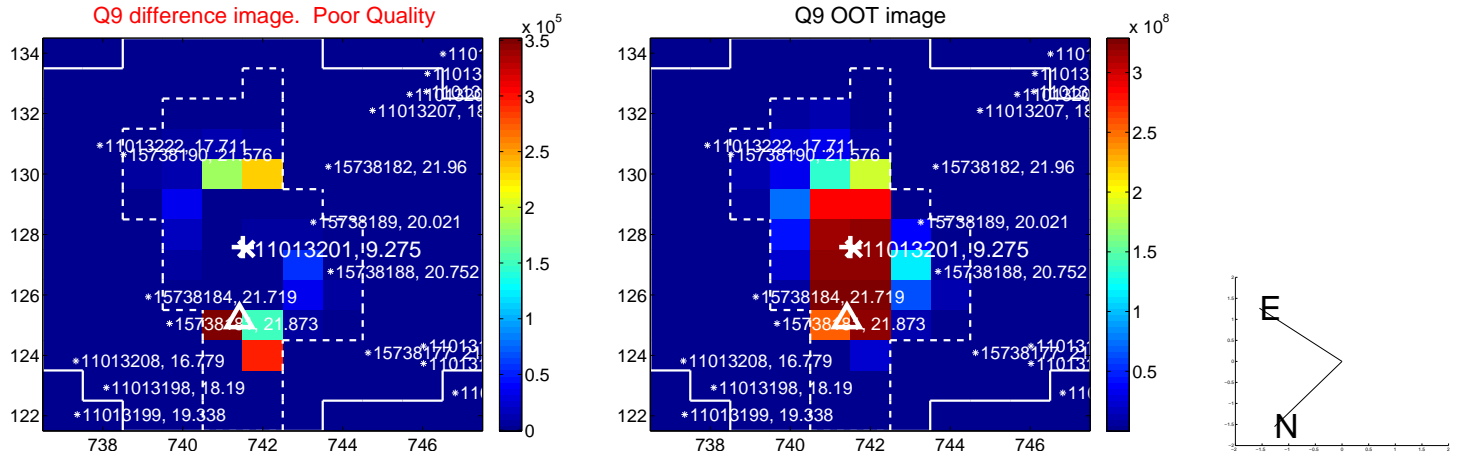
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



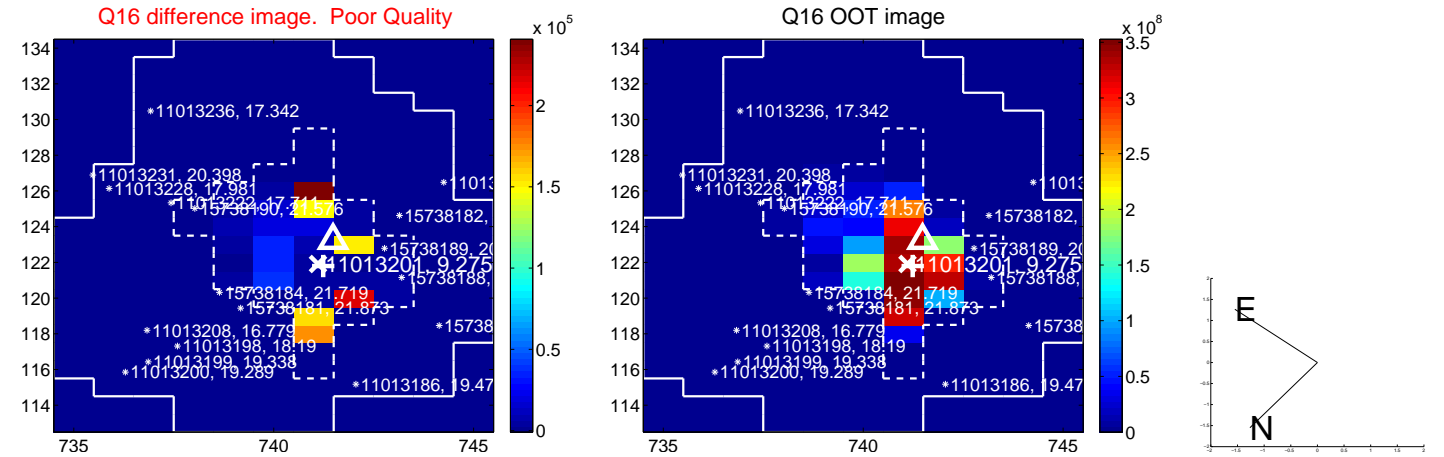
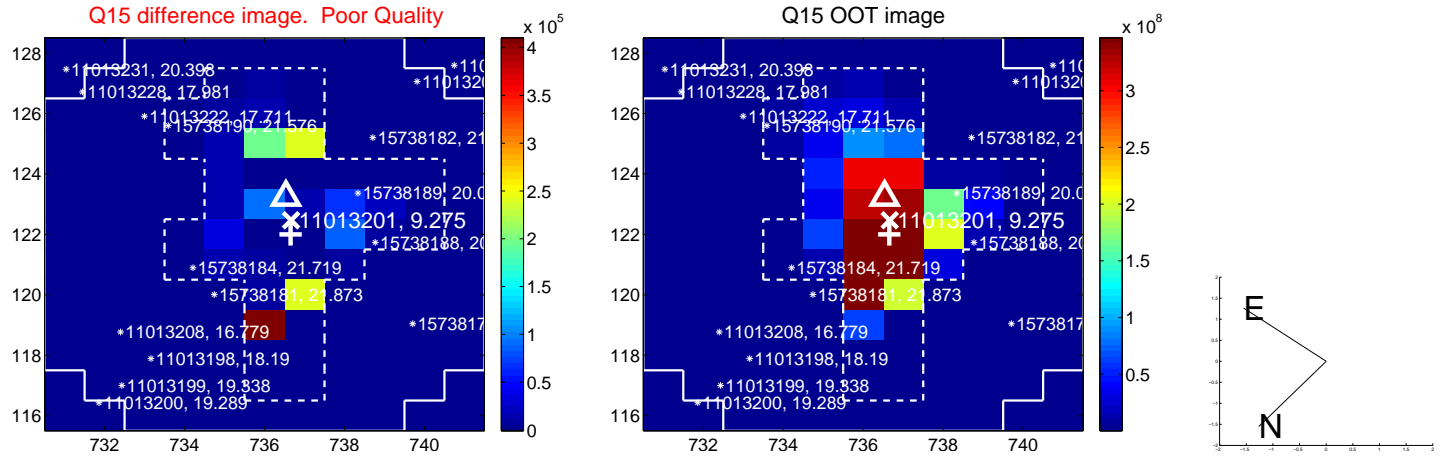
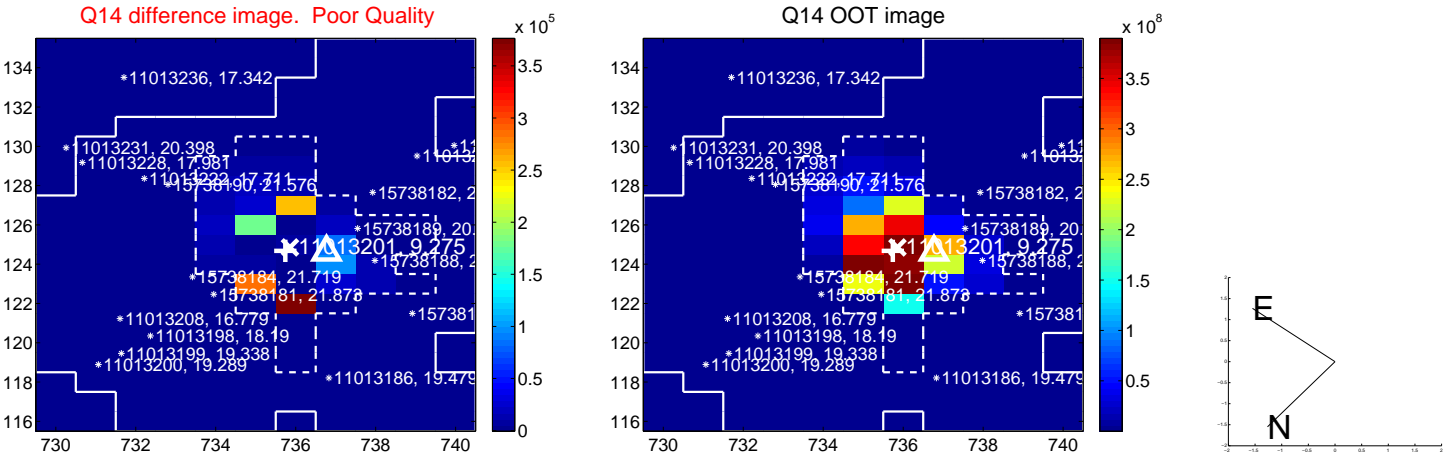
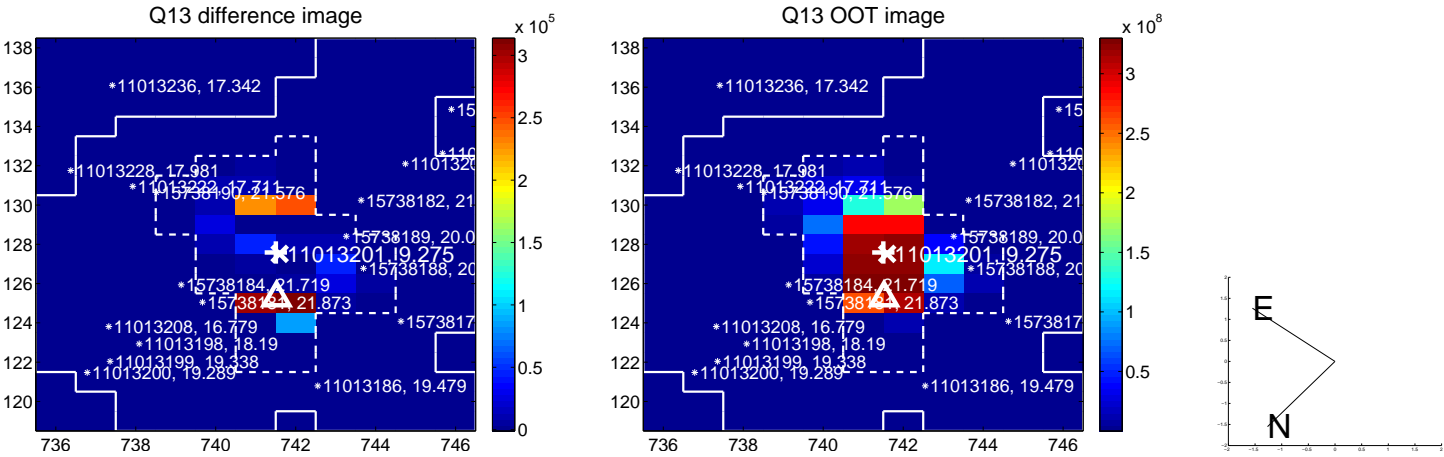
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



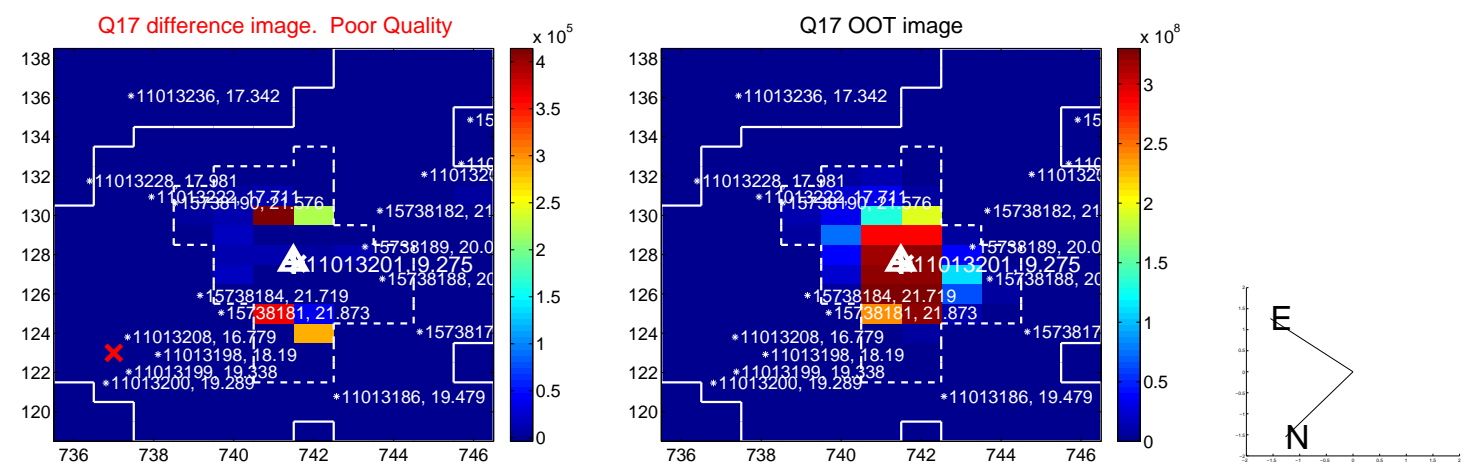
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



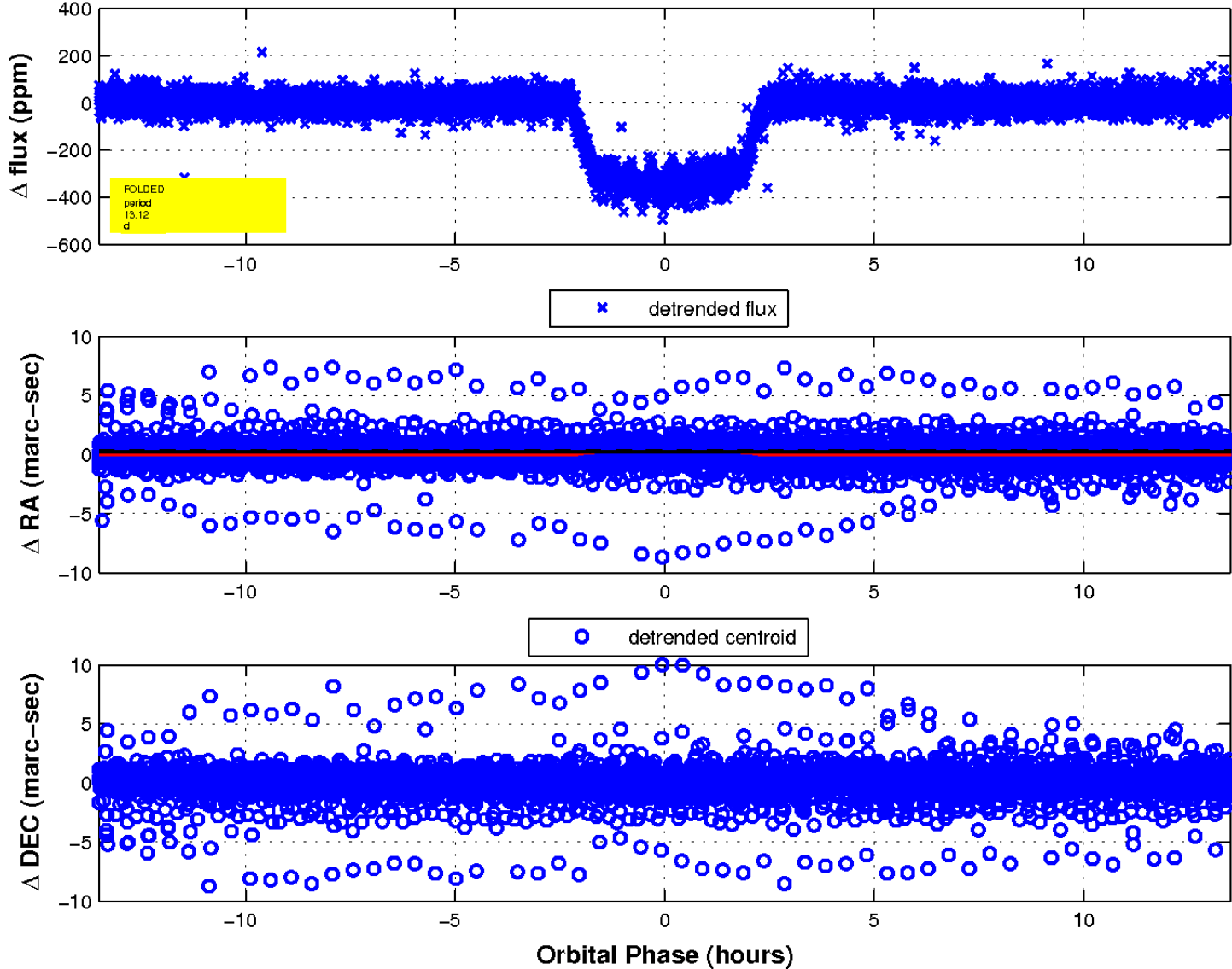
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



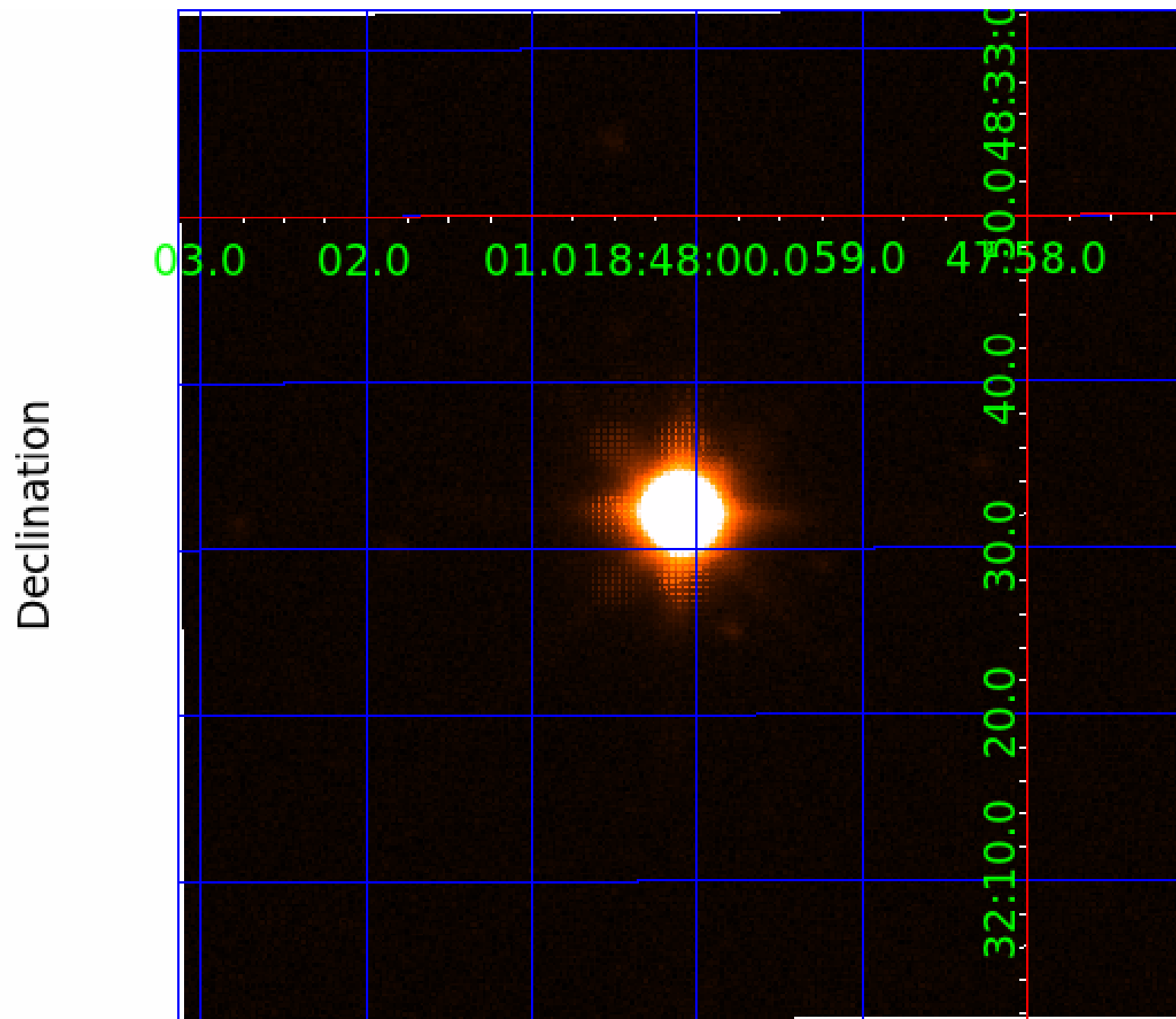
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 011013201

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
011013201-01	OBS	0972.01	13.118960	143.469155	361.4	4.503	182.4	180.2	4.24	7221	9.23	2313.81
011013201-02	OBS	0972.02	7.821900	139.141032	31.9	4.715	20.9	21.5	4.24	7221	2.86	4610.82
011013201-03	OBS	No	0.677303	132.007600	4.5	6.989	11.1	10.8	4.24	7221	0.92	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011013201-01	OBS	PC	0.63	0	0	0	0	CENT_SATURATED
011013201-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—CENT_SATURATED
011013201-03	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

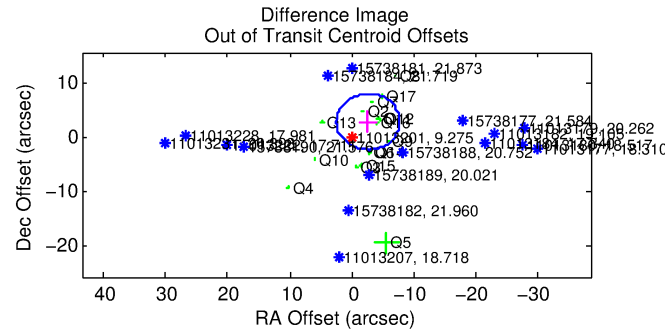
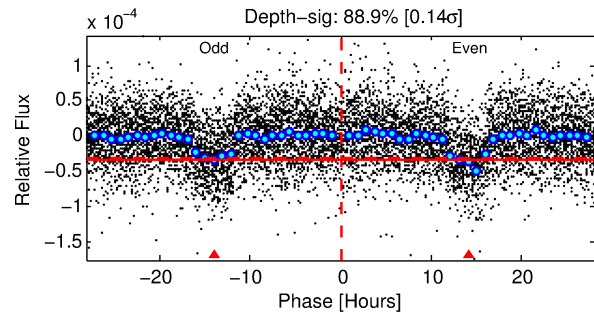
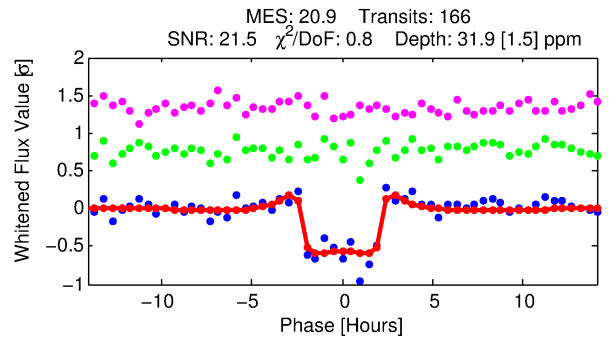
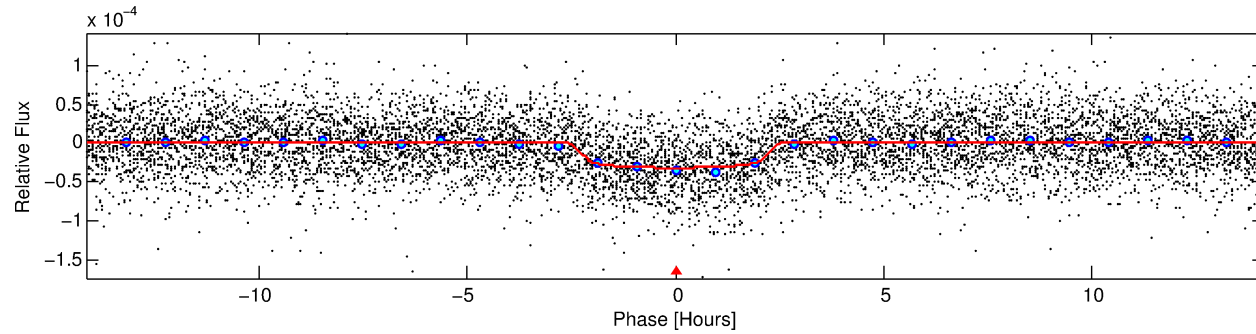
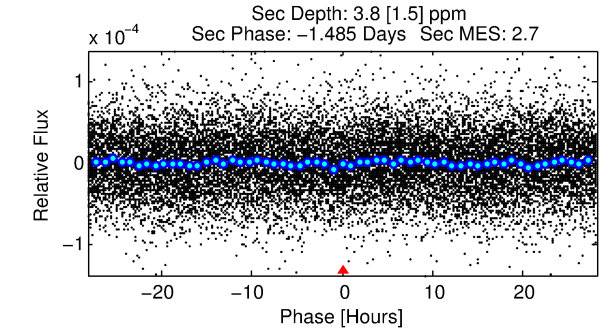
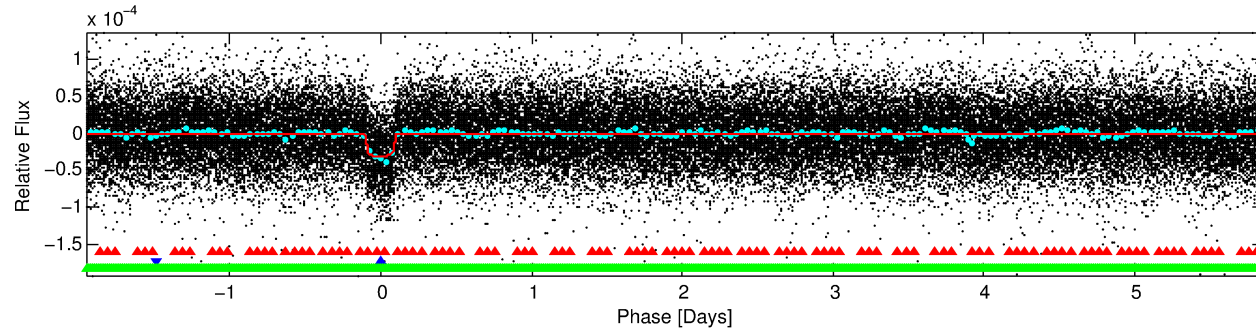
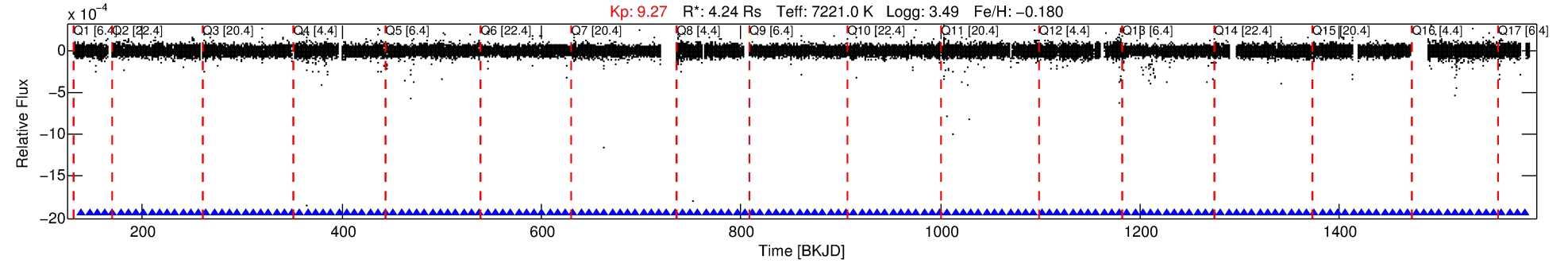
Ephemeris Match Information For 011013201-02

No Significant Match Found

DV One-Page Summary

KIC: 11013201 Candidate: 2 of 3 Period: 7.822 d

KOI: K00972.02 Corr: 0.992



DV Fit Results:

Period = 7.82190 [0.00003] d
Epoch = 139.1410 [0.0023] BKJD
Rp/R* = 0.0062 [0.0006]
a/R* = 5.34 [2.64]
b = 0.92 [0.09]
Seff = 4610.82 [2182.56]
Teq = 2101 [249] K
Rp = 2.86 [0.90] Re
a = 0.0975 [0.0283] AU
Ag = 2.45 [1.56] [0.93σ]
Teffp = 4064 [454] K [3.80σ]

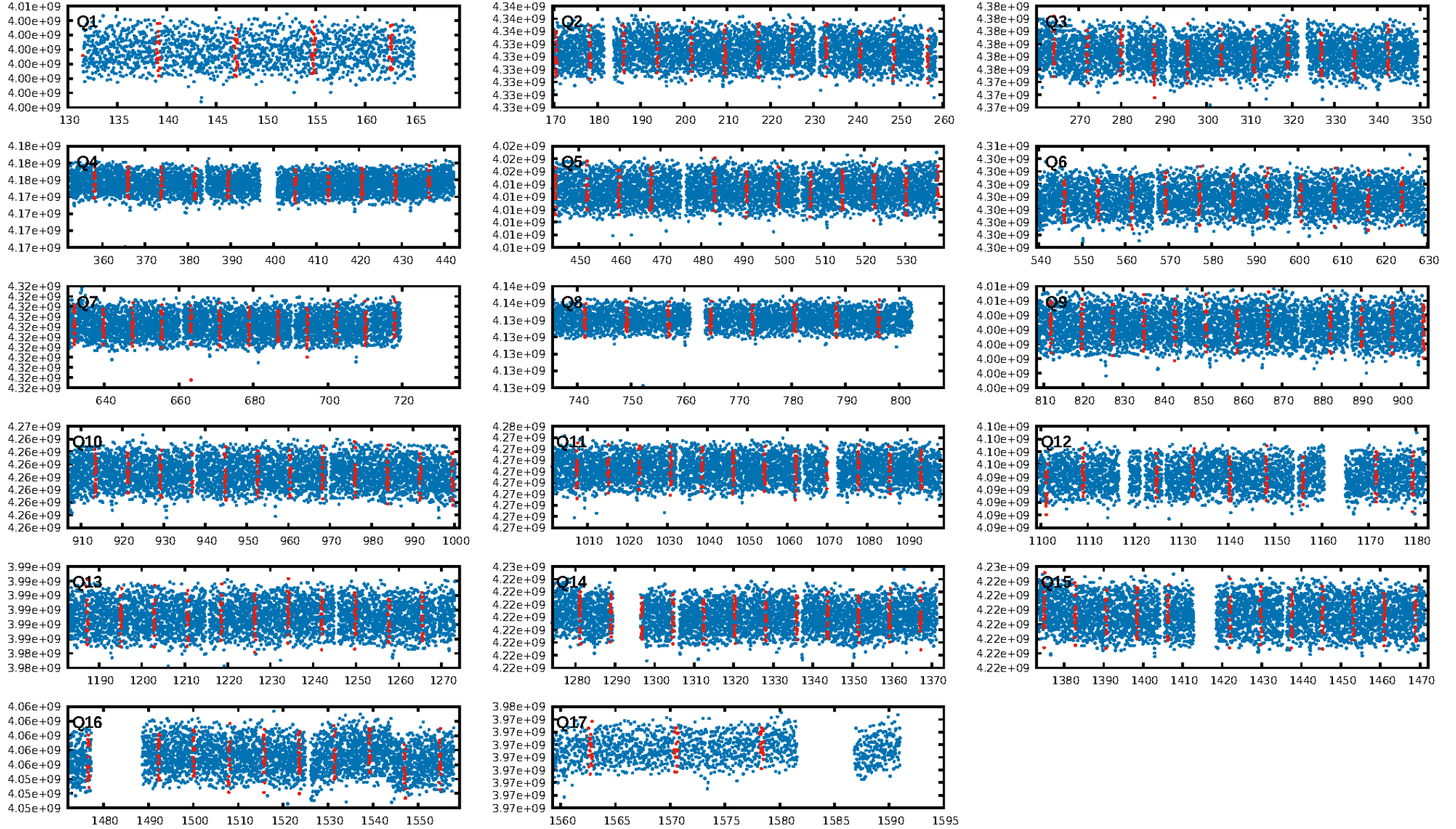
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.34σ]
LongPeriod-sig: 100.0% [19.50σ]
ModelChiSquare2-sig: 96.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [159/159]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 1.113 arcsec [1.12σ]
OotOffset-rm: 3.852 arcsec [2.26σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 5.553 arcsec [3.35σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.19 [3/16]
DiffImageOverlap-fno: 0.00 [0/17]

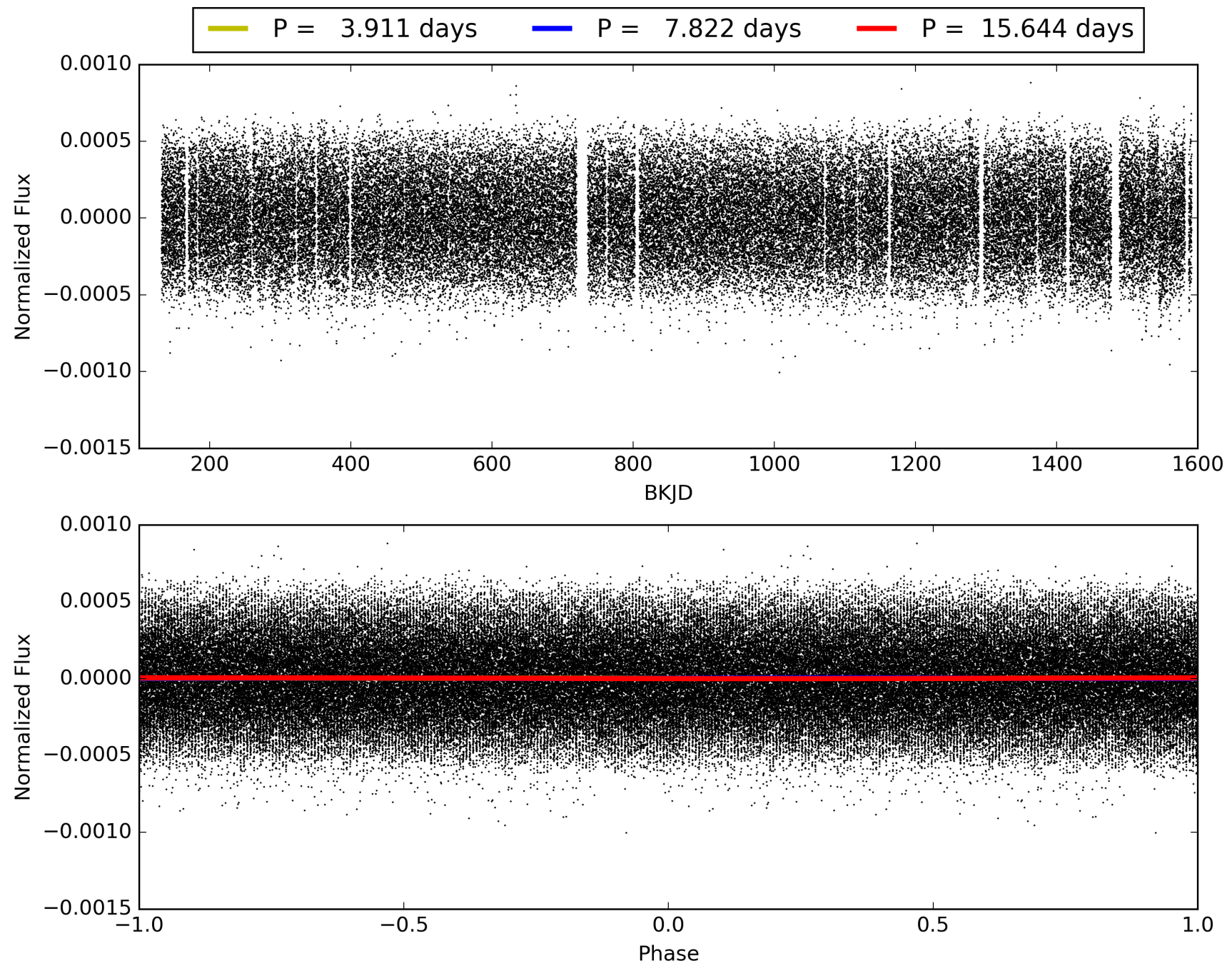
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:07:54 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011013201-02, PDC Light Curves

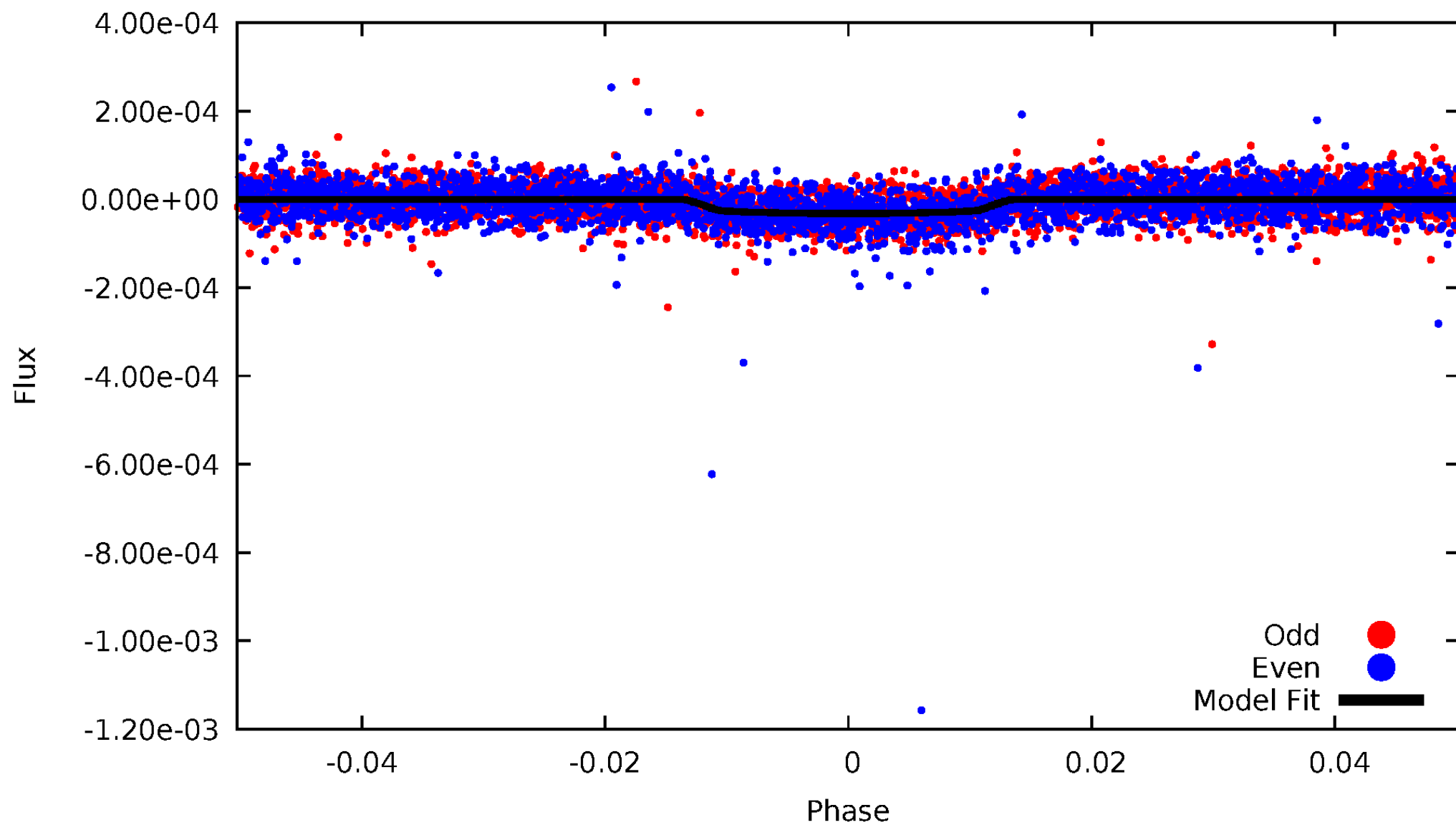


TCE 011013201-02



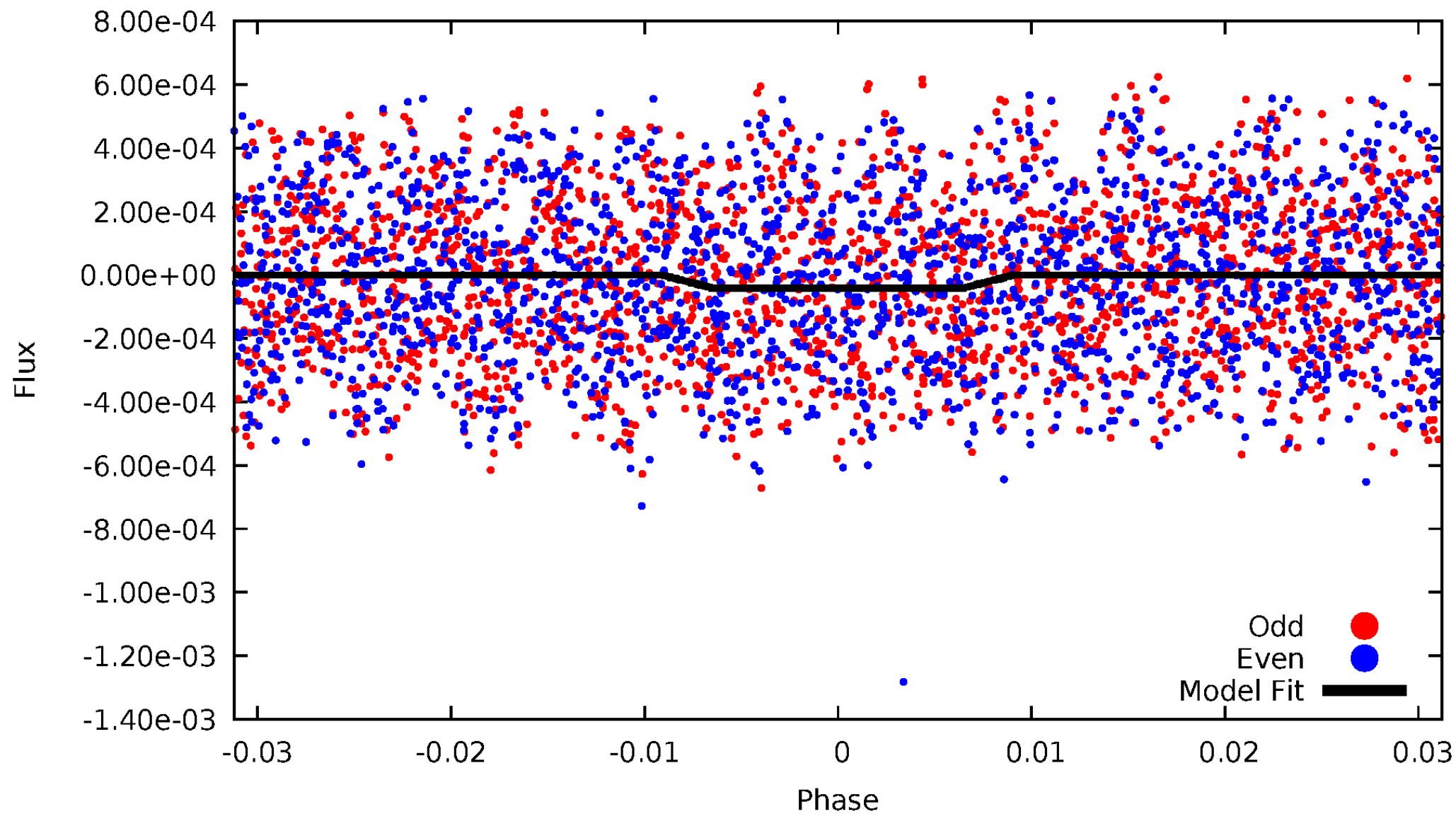
DV Odd/Even

TCE 011013201-02



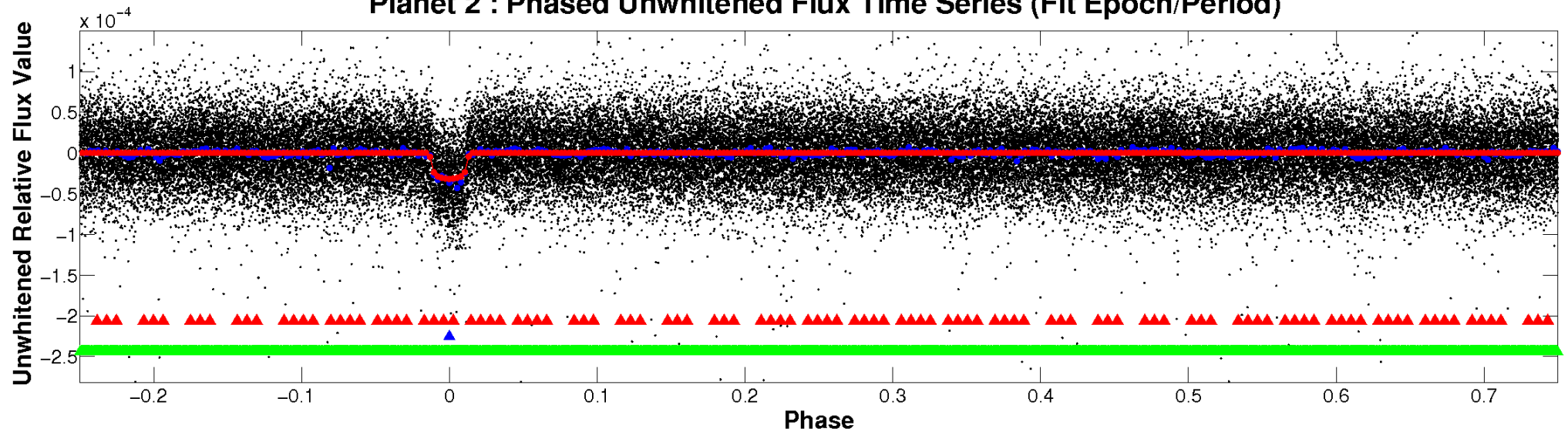
ALT Odd/Even

TCE 011013201-02

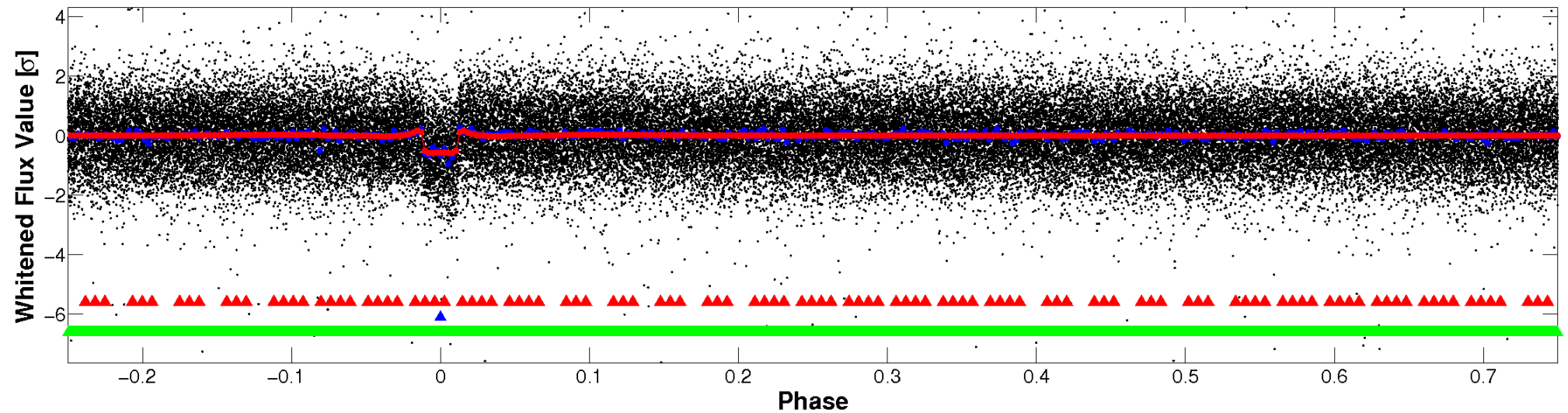


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

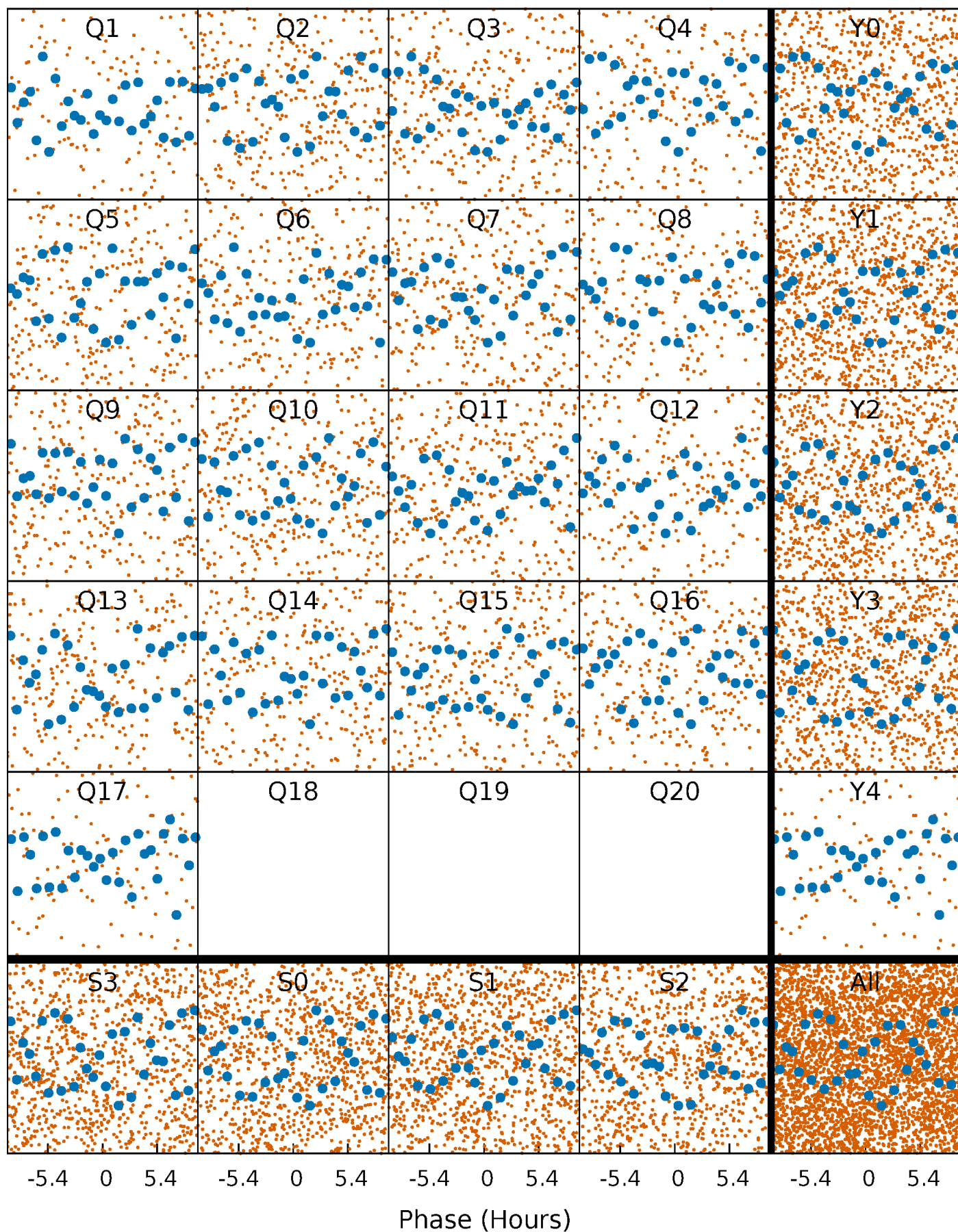


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



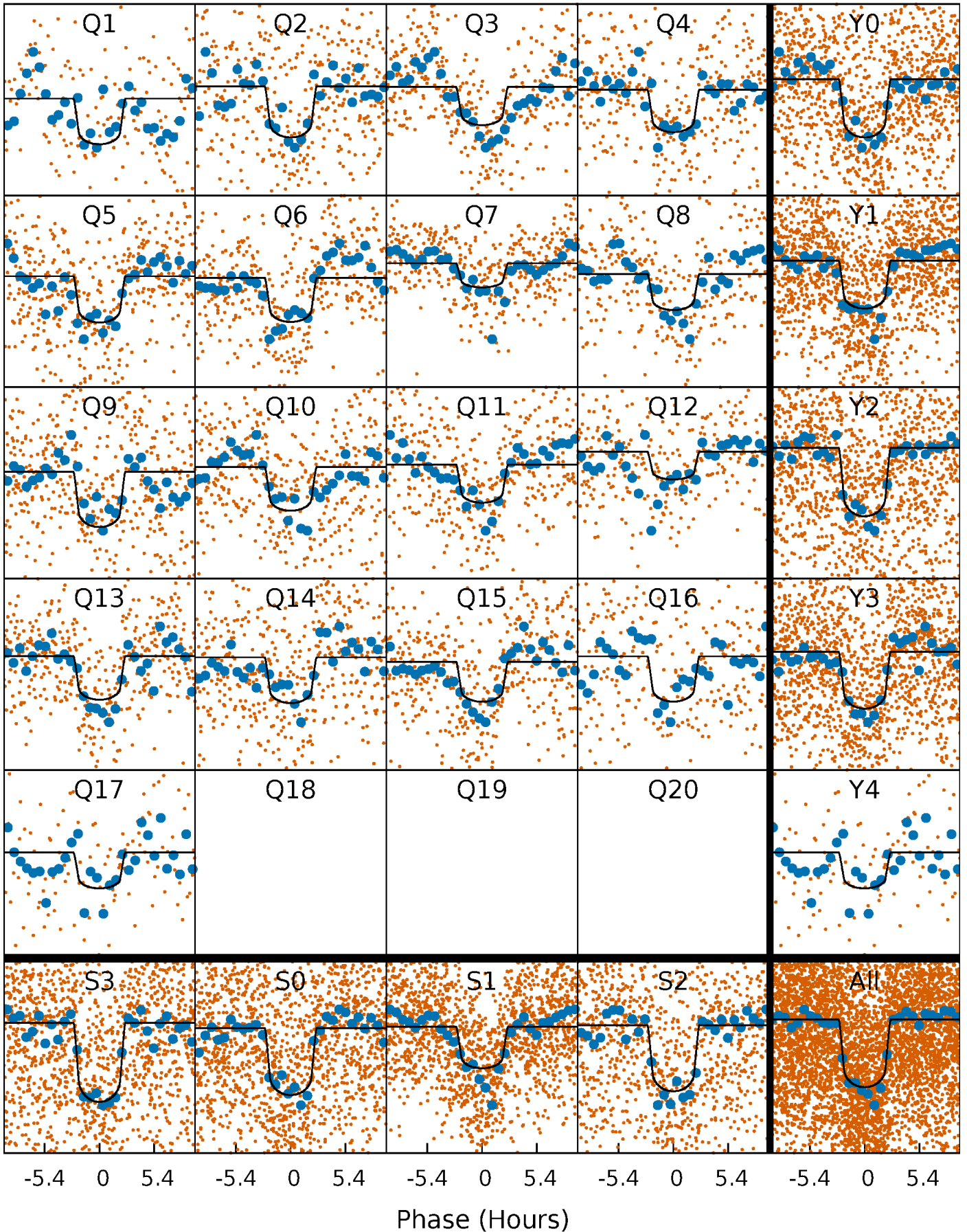
PDC Quarter-Phased Transit Curves

TCE 011013201-02 P= 7.821900 Days $T_0=139.141032$ (BKJD)



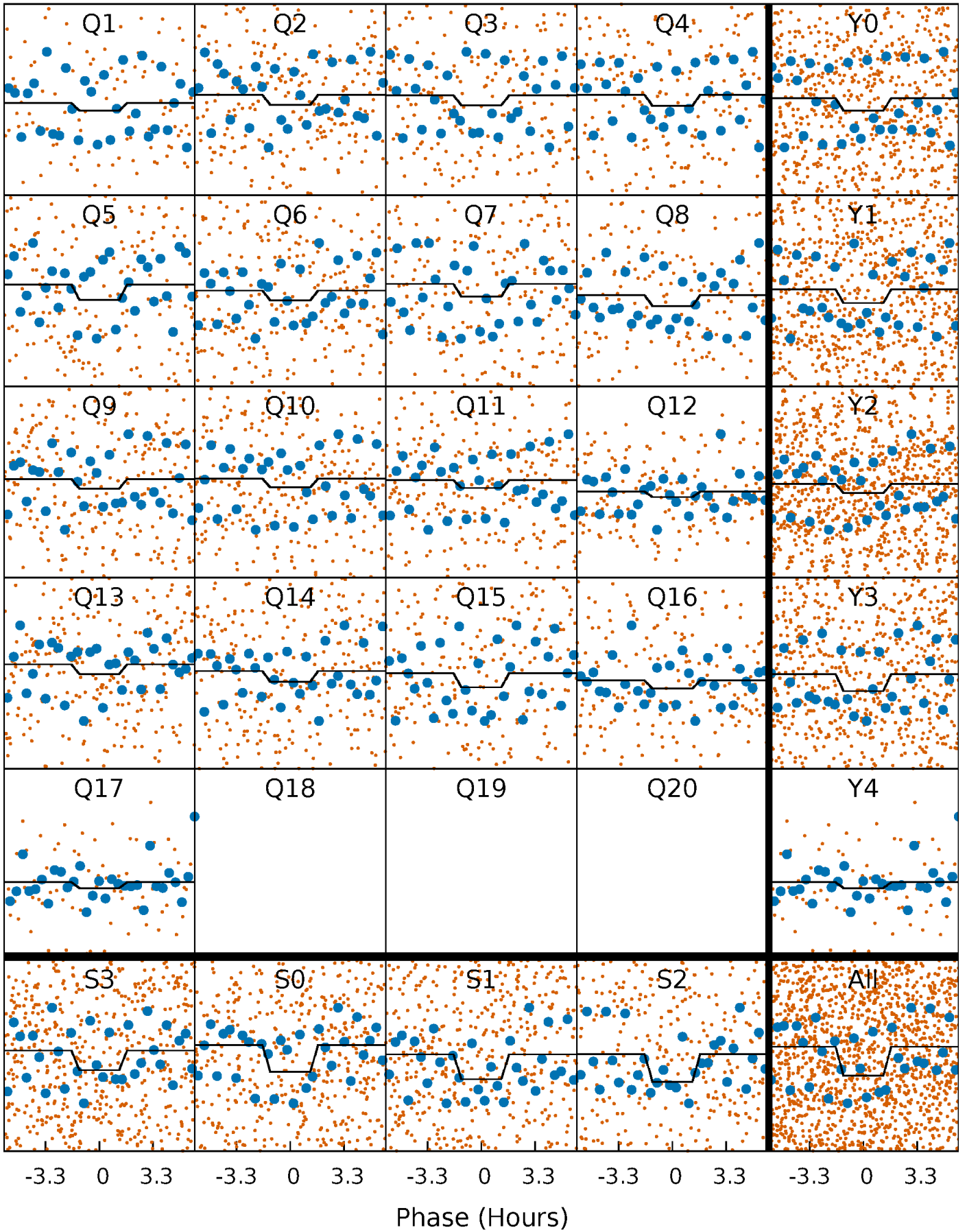
DV Quarter-Phased Transit Curves

TCE 011013201-02 P= 7.821900 Days $T_0=139.141032$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

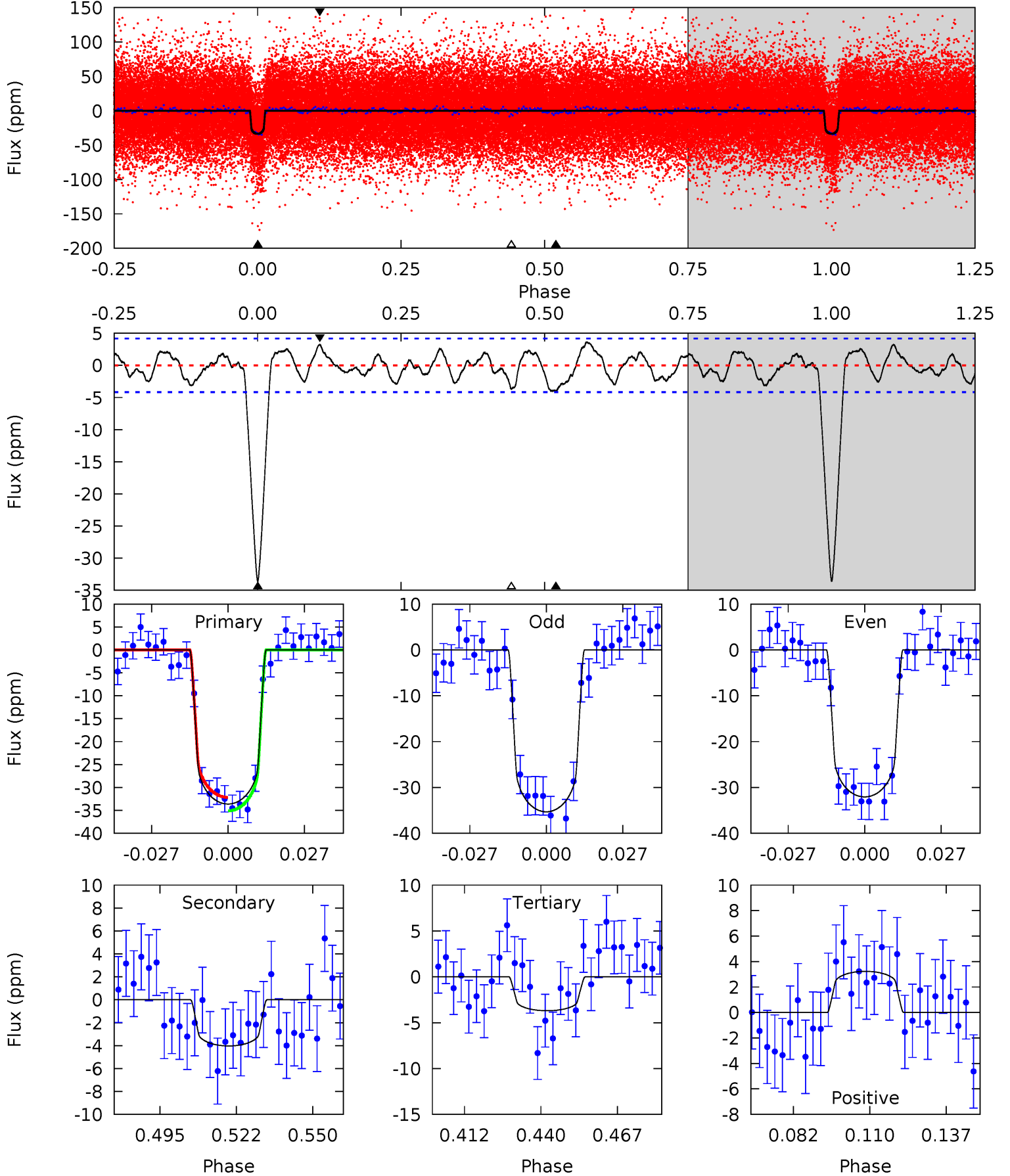
TCE 011013201-02 P= 7.821770 Days $T_0=139.170323$ (BKJD)



DV Model-Shift Uniqueness Test

011013201-02, P = 7.821900 Days, E = 131.319132 Days

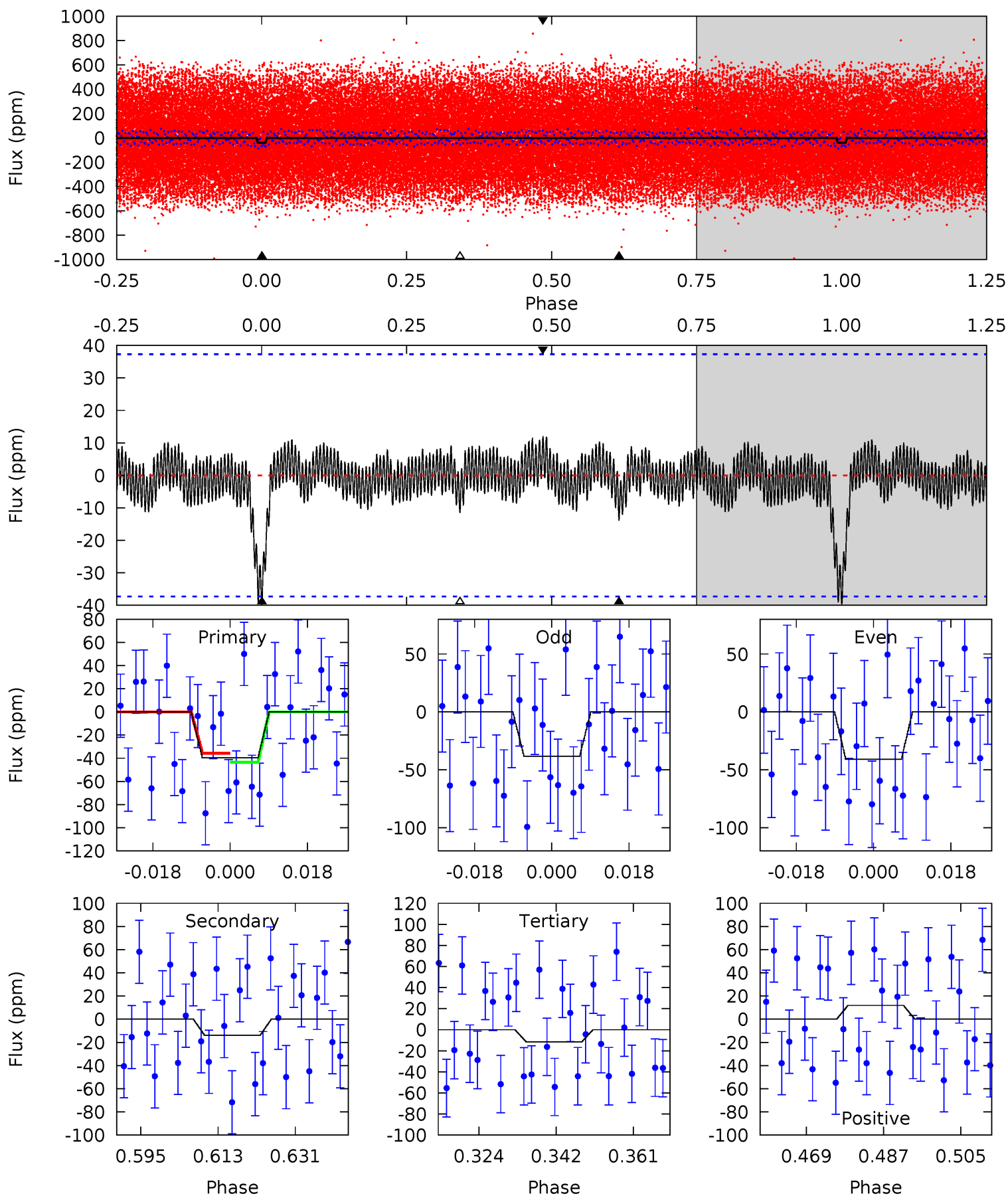
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.9	4.66	4.27	3.74	4.83	2.20	1.84	34.6	35.1	0.39	0.92	1.88	1.07	0.10	1.71



Alt Model-Shift Uniqueness Test

011013201-02, P = 7.821770 Days, E = 131.348553 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.21	1.83	1.52	1.57	4.91	2.37	0.66	3.70	3.65	0.31	0.26	0.17	1.04	0.23	0.51



Stellar Parameters For KIC 011013201

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7221^{+114}_{-171}	$3.488^{+0.272}_{-0.048}$	$-0.180^{+0.150}_{-0.100}$	$4.240^{+0.227}_{-1.284}$	$2.018^{+0.029}_{-0.248}$	$0.037^{+0.065}_{-0.004}$
	+2%/-2%	+8%/-1%	+83%/-56%	+5%/-30%	+1%/-12%	+174%/-11%
Source	SPE4	SPE4	SPE4	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011013201-02 / KOI 0972.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$2.72^{+0.36}_{-0.45}$	2893^{+107}_{-220}	4197^{+248}_{-268}	$2.712^{+1.297}_{-0.748}$
Alt.	-14 ± 8	$2.83^{+0.34}_{-0.45}$	2882^{+116}_{-202}	5445^{+696}_{-885}	$9.026^{+6.760}_{-5.085}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

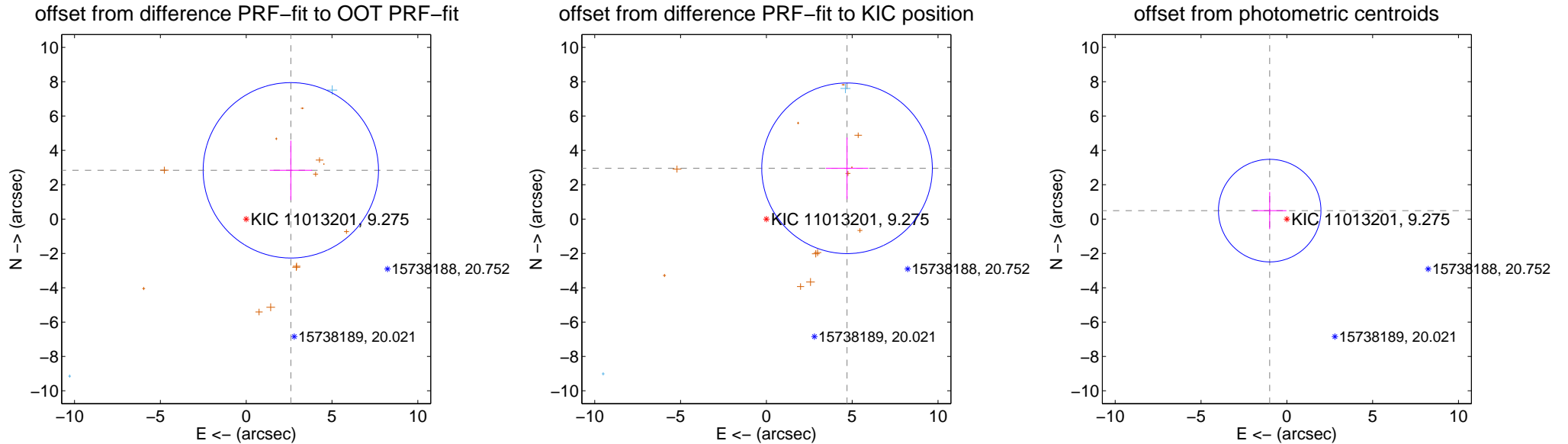
DV Centroid Data

Supplemental centroid analysis for 011013201-02. **Kepler magnitude: 9.28.** Transit SNR 21.52

There are 3 quarters with good PRF difference image offsets

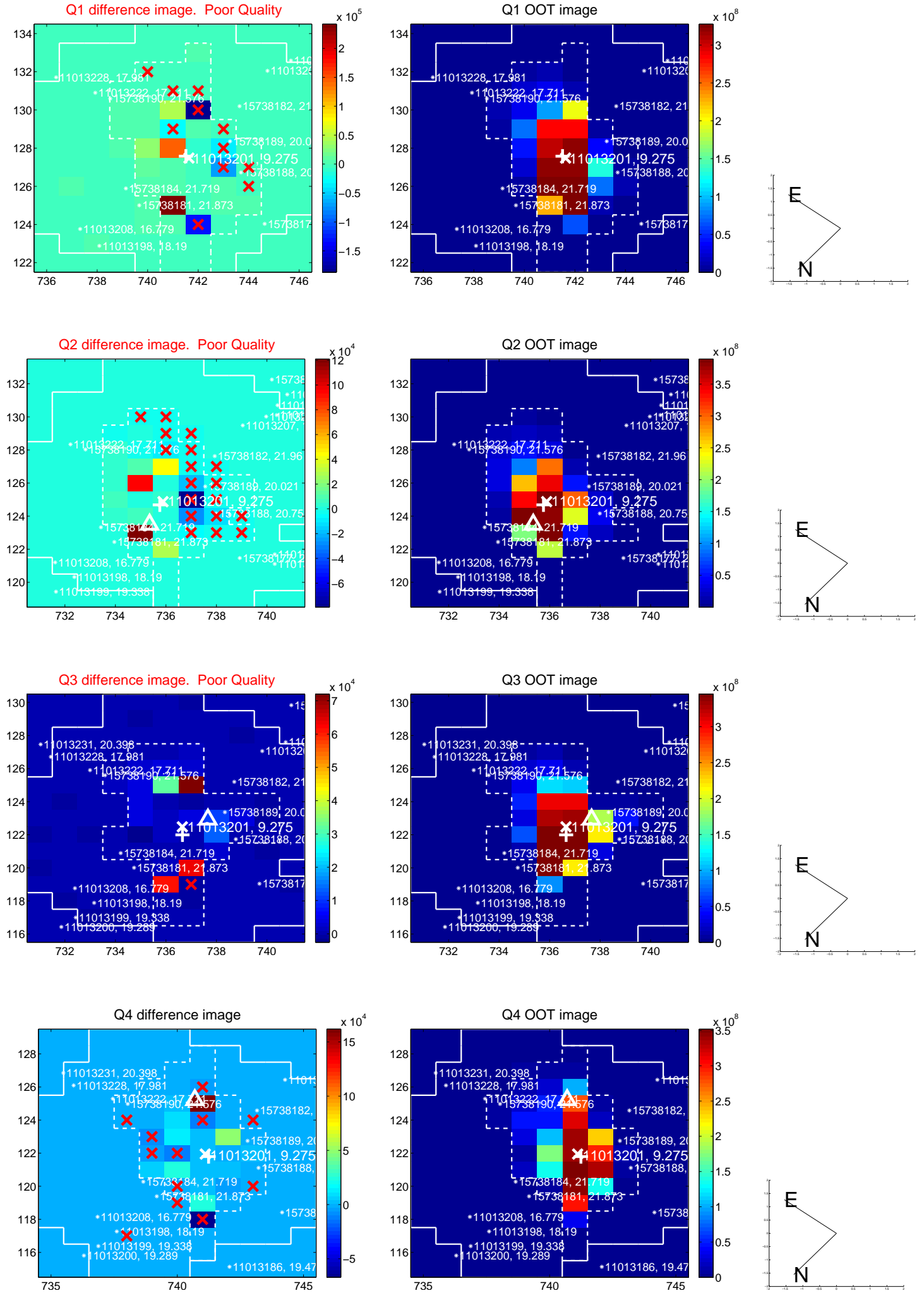
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.852 ± 1.703	2.26	-2.602 ± 1.231	2.840 ± 1.733
PRF-fit source offset from KIC position	5.553 ± 1.656	3.35	-4.700 ± 1.236	2.958 ± 1.792
photometric centroid source offset	1.11 ± 1.00	1.12	1.00 ± 0.97	0.49 ± 1.08

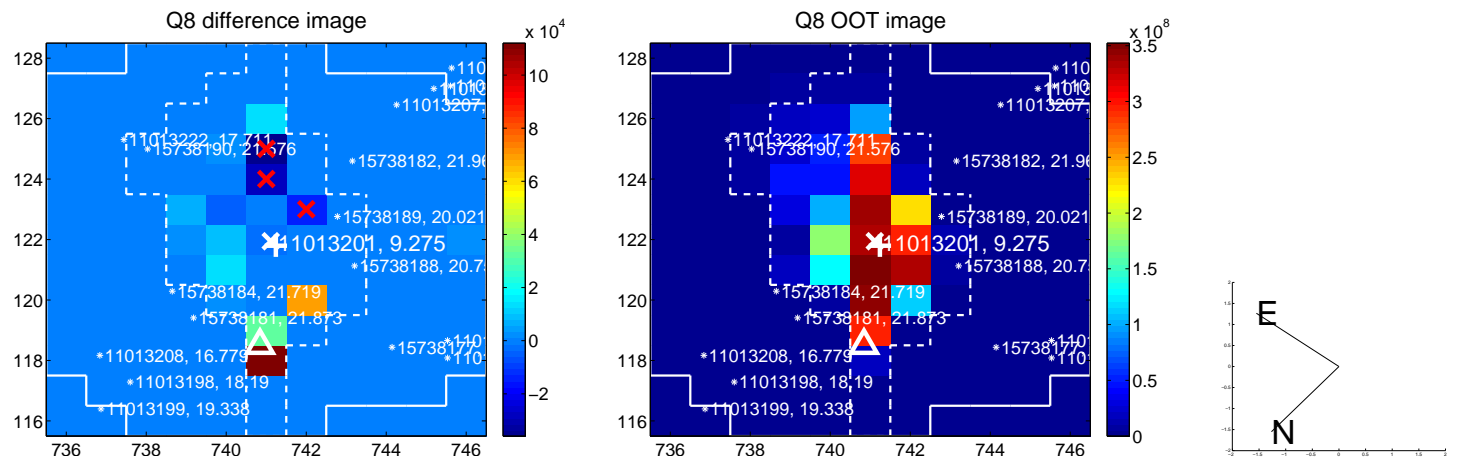
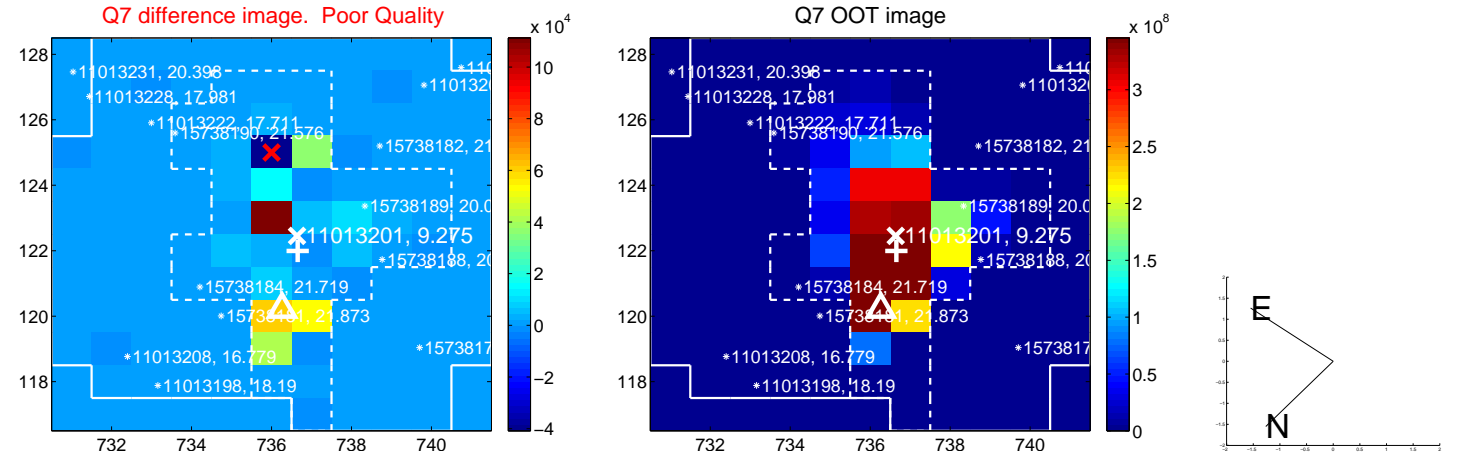
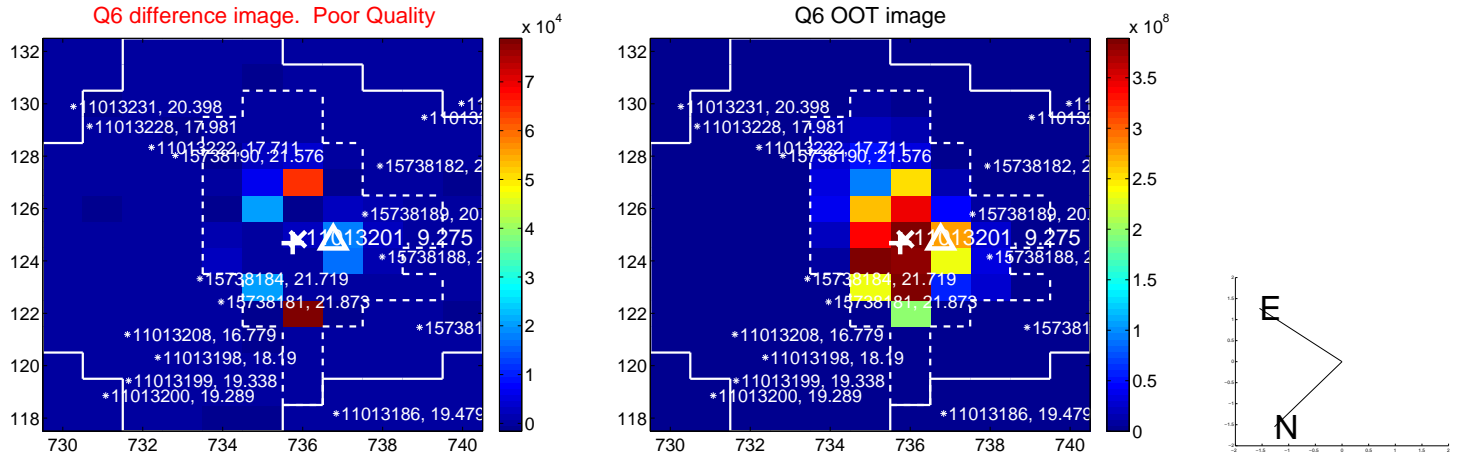
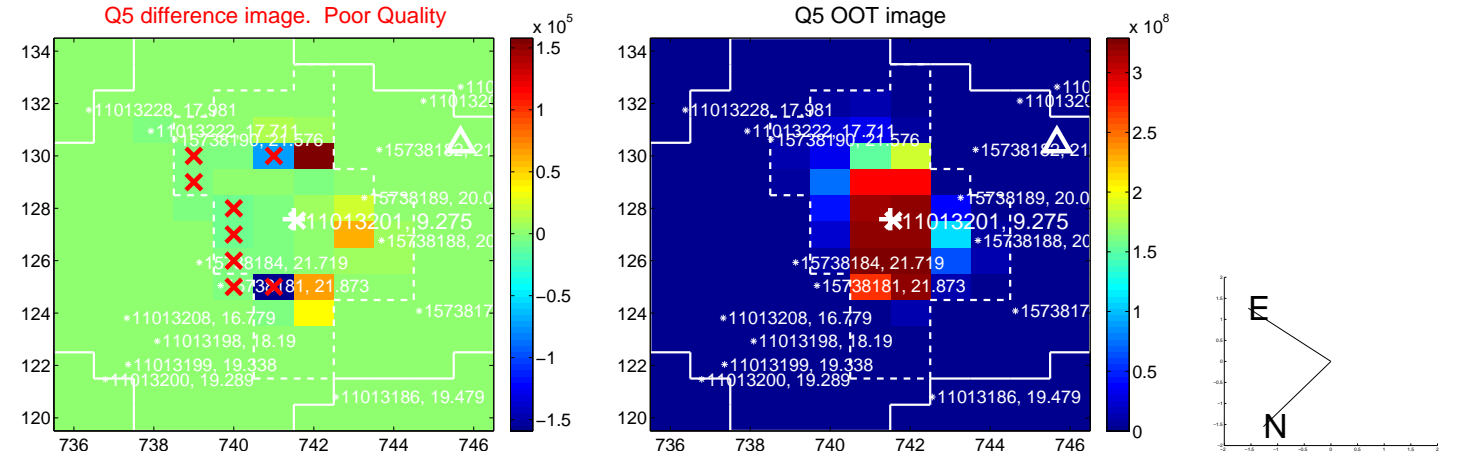


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

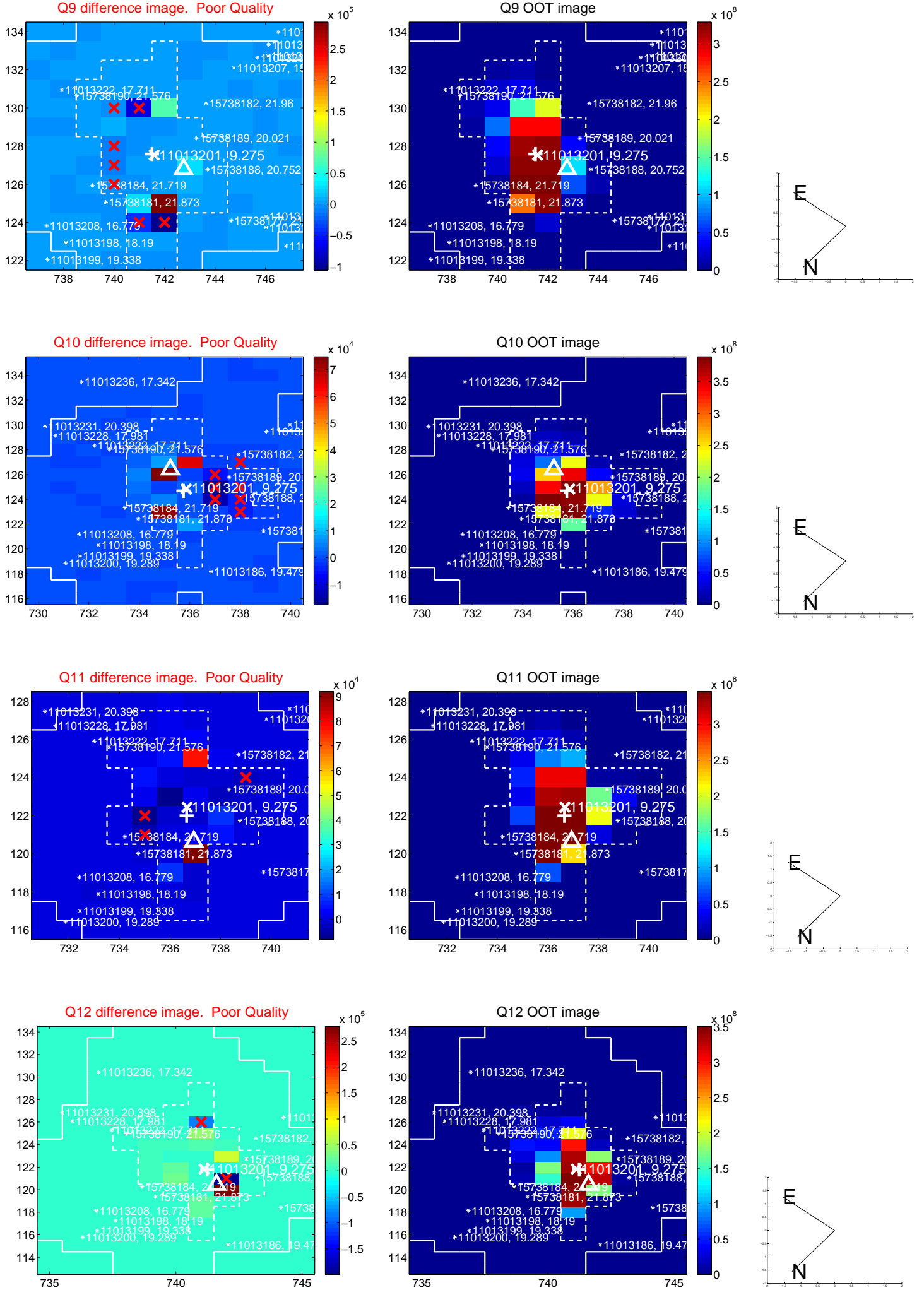
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



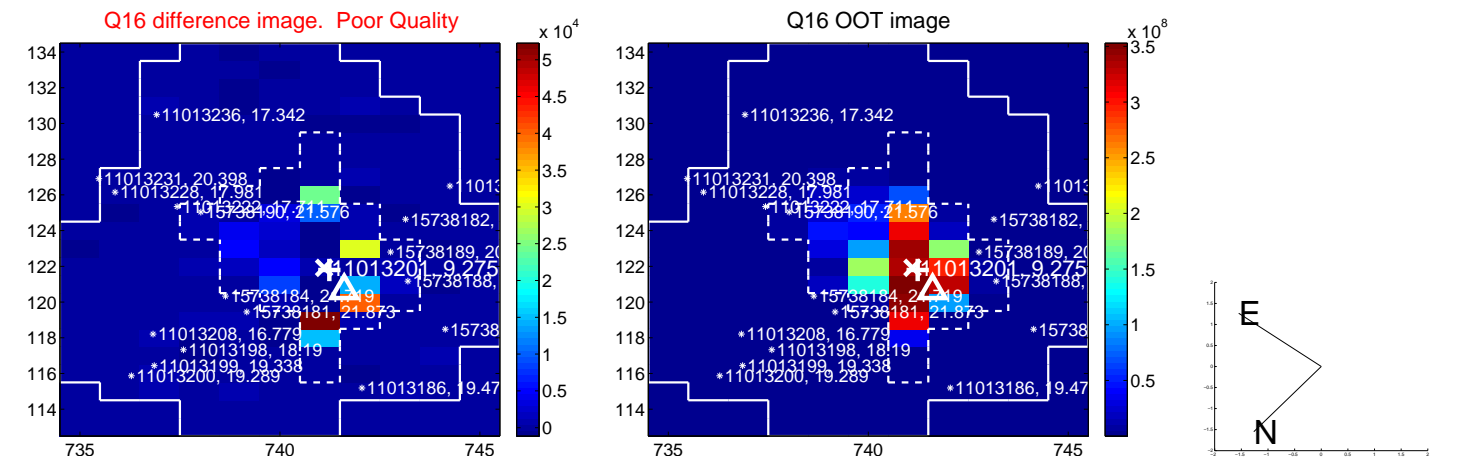
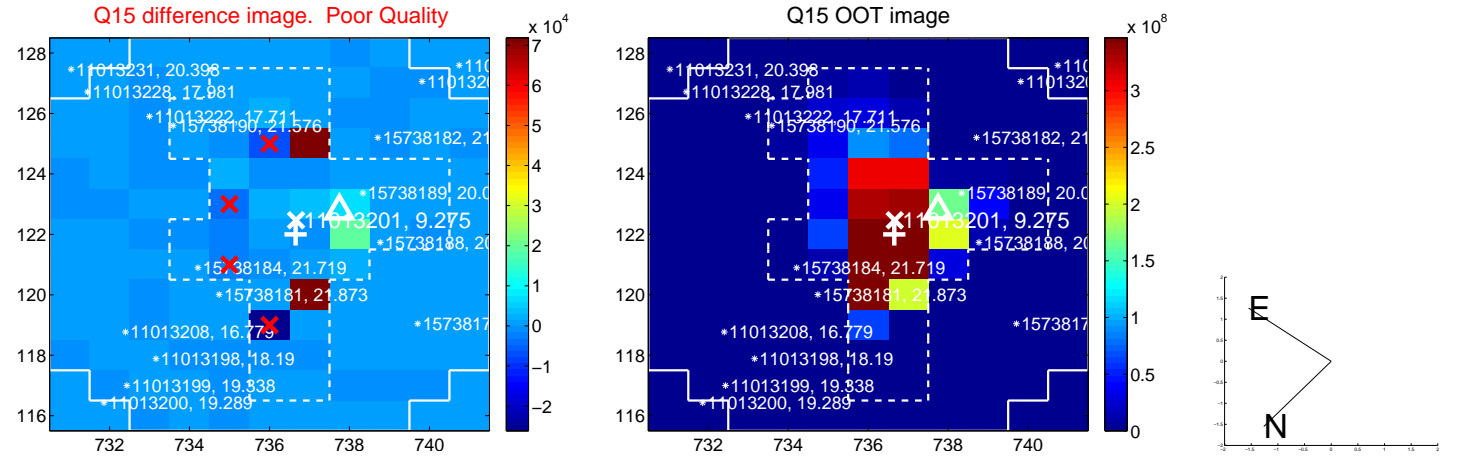
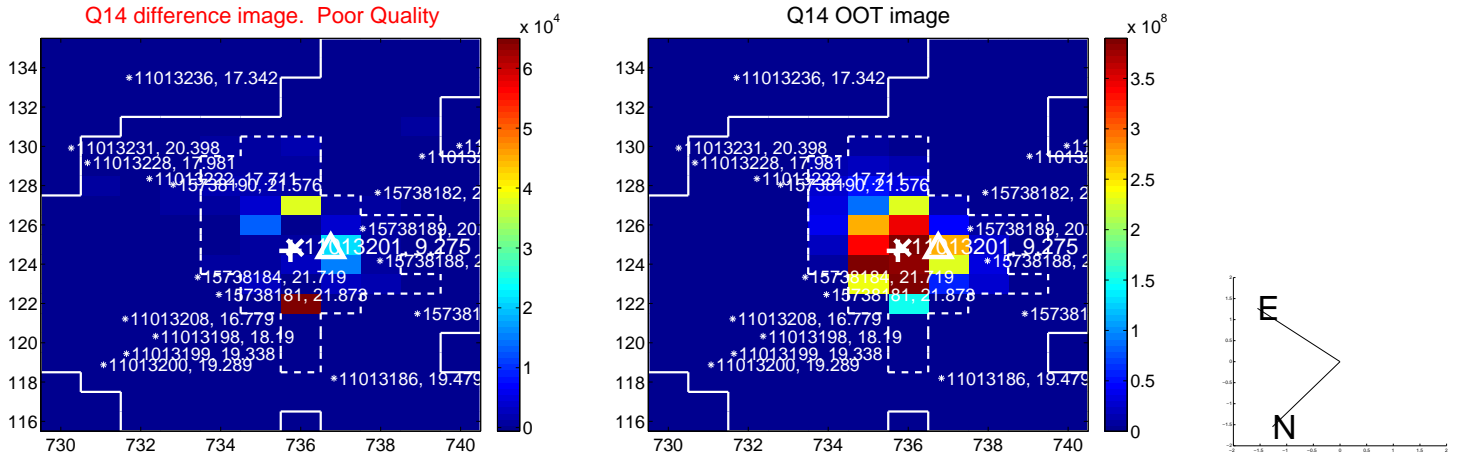
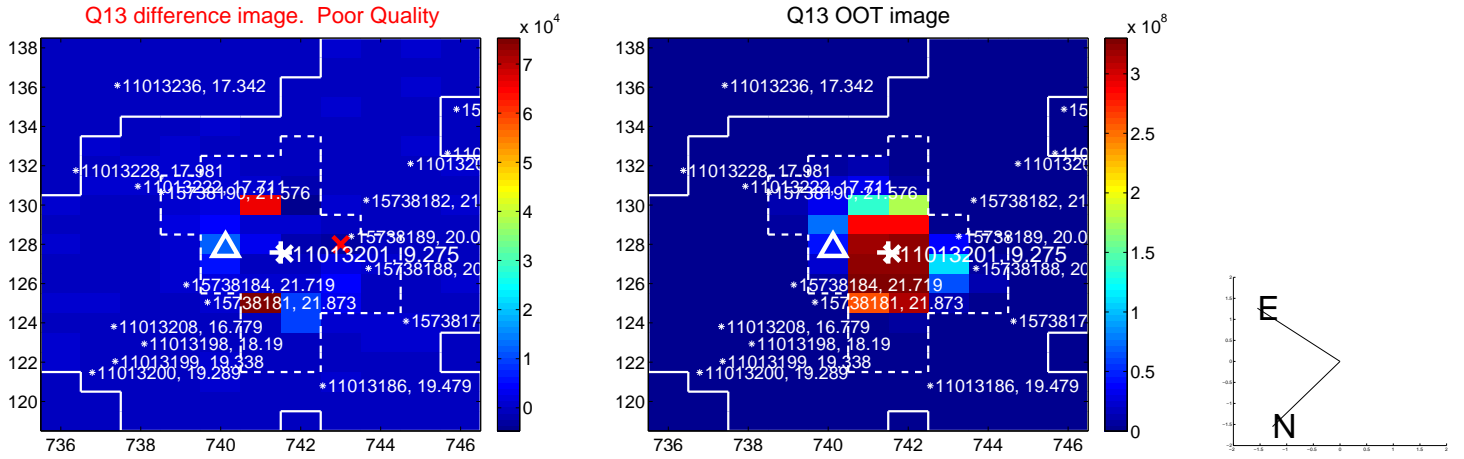
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



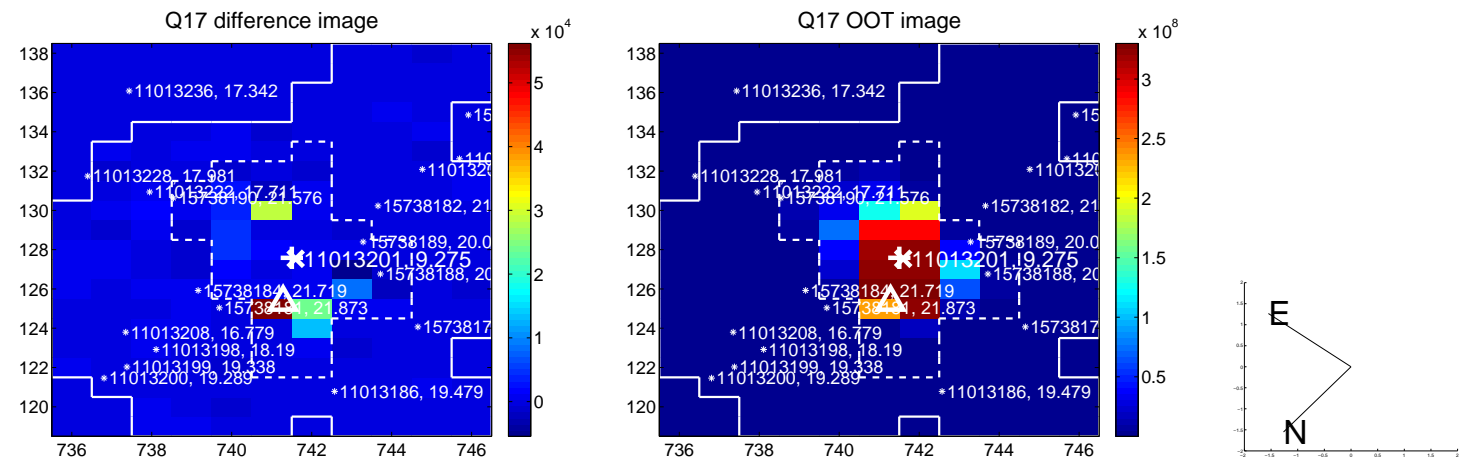
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



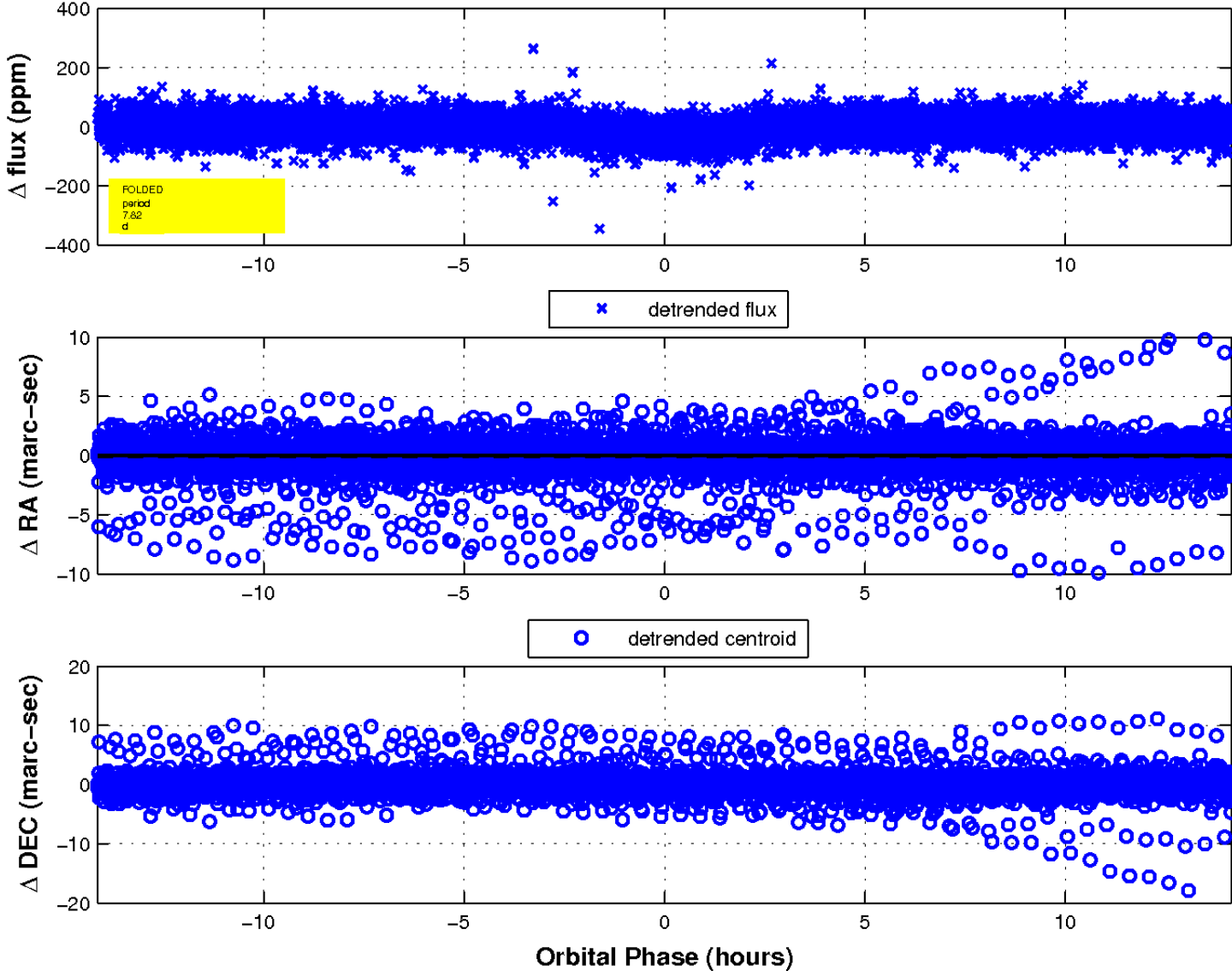
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



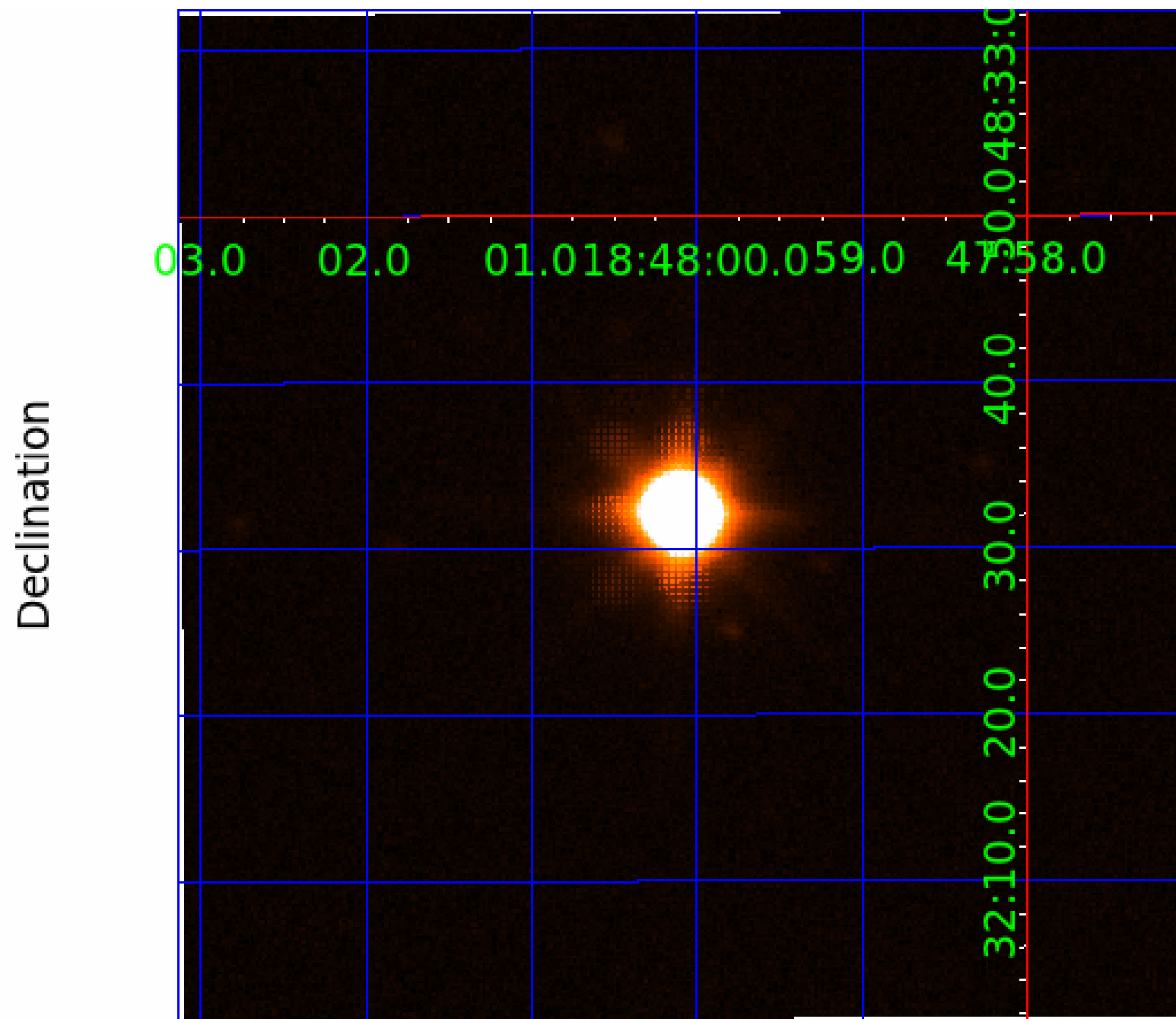
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 011013201

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
011013201-01	OBS	0972.01	13.118960	143.469155	361.4	4.503	182.4	180.2	4.24	7221	9.23	2313.81
011013201-02	OBS	0972.02	7.821900	139.141032	31.9	4.715	20.9	21.5	4.24	7221	2.86	4610.82
011013201-03	OBS	No	0.677303	132.007600	4.5	6.989	11.1	10.8	4.24	7221	0.92	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011013201-01	OBS	PC	0.63	0	0	0	0	CENT_SATURATED
011013201-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—CENT_SATURATED
011013201-03	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

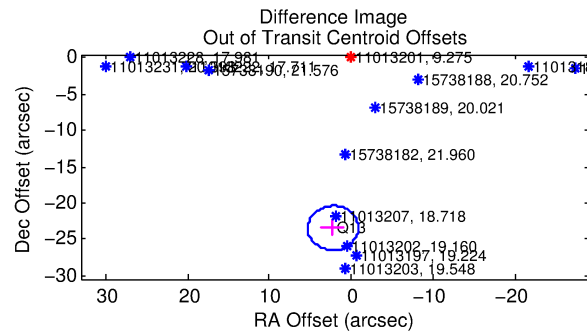
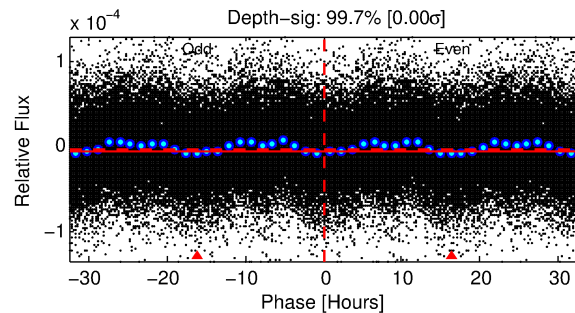
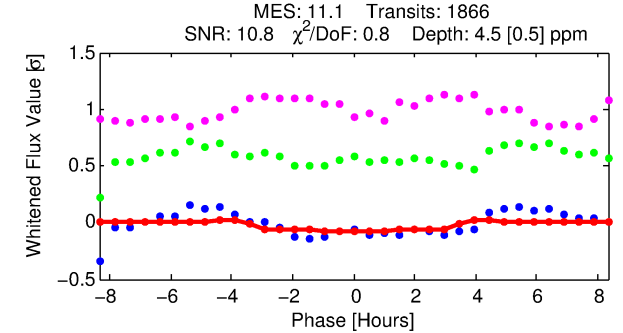
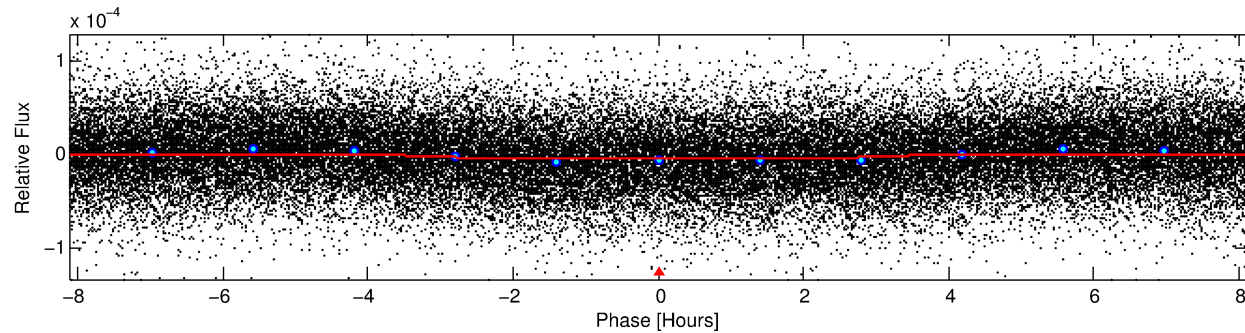
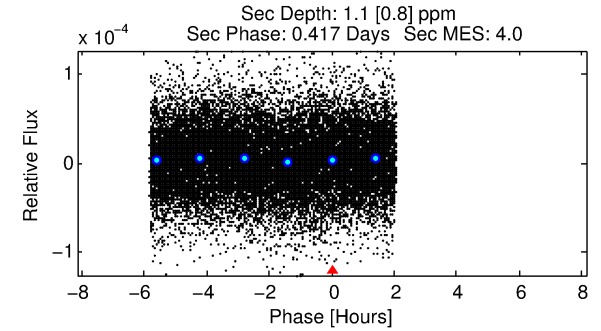
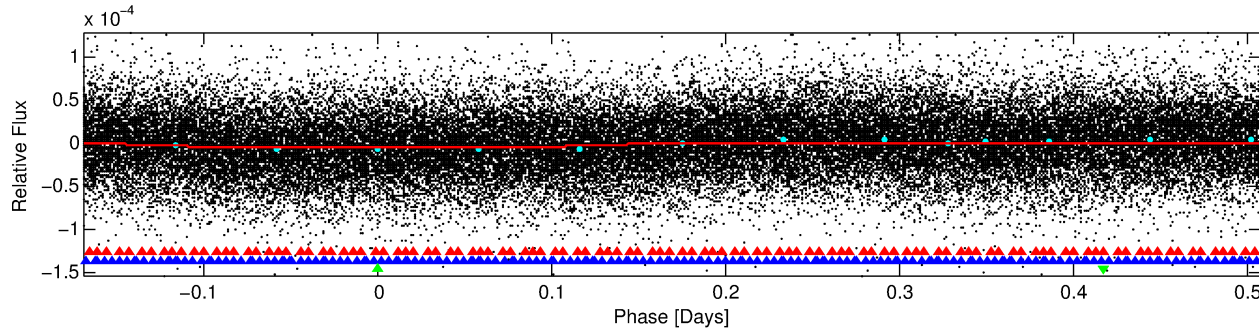
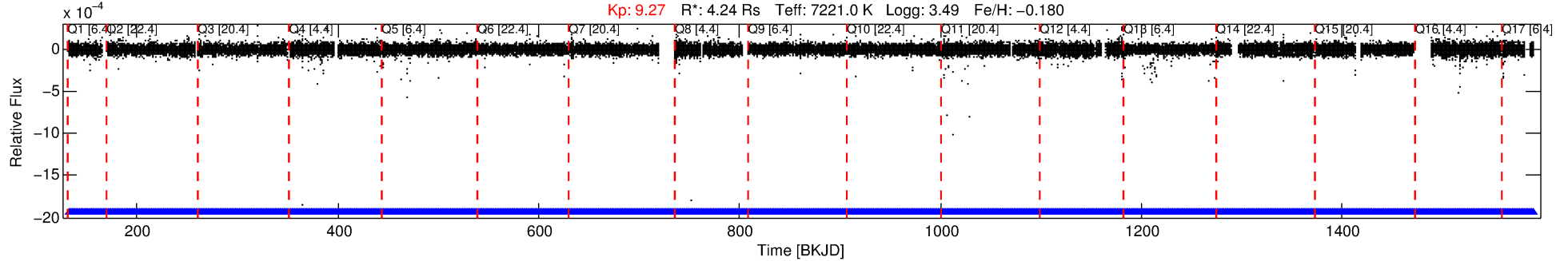
Ephemeris Match Information For 011013201-03

No Significant Match Found

DV One-Page Summary

KIC: 11013201 Candidate: 3 of 3 Period: 0.677 d
KOI: K00972 Corr: No Ephemeris Match

Kp: 9.27 R*: 4.24 Rs Teff: 7221.0 K Logg: 3.49 Fe/H: -0.180



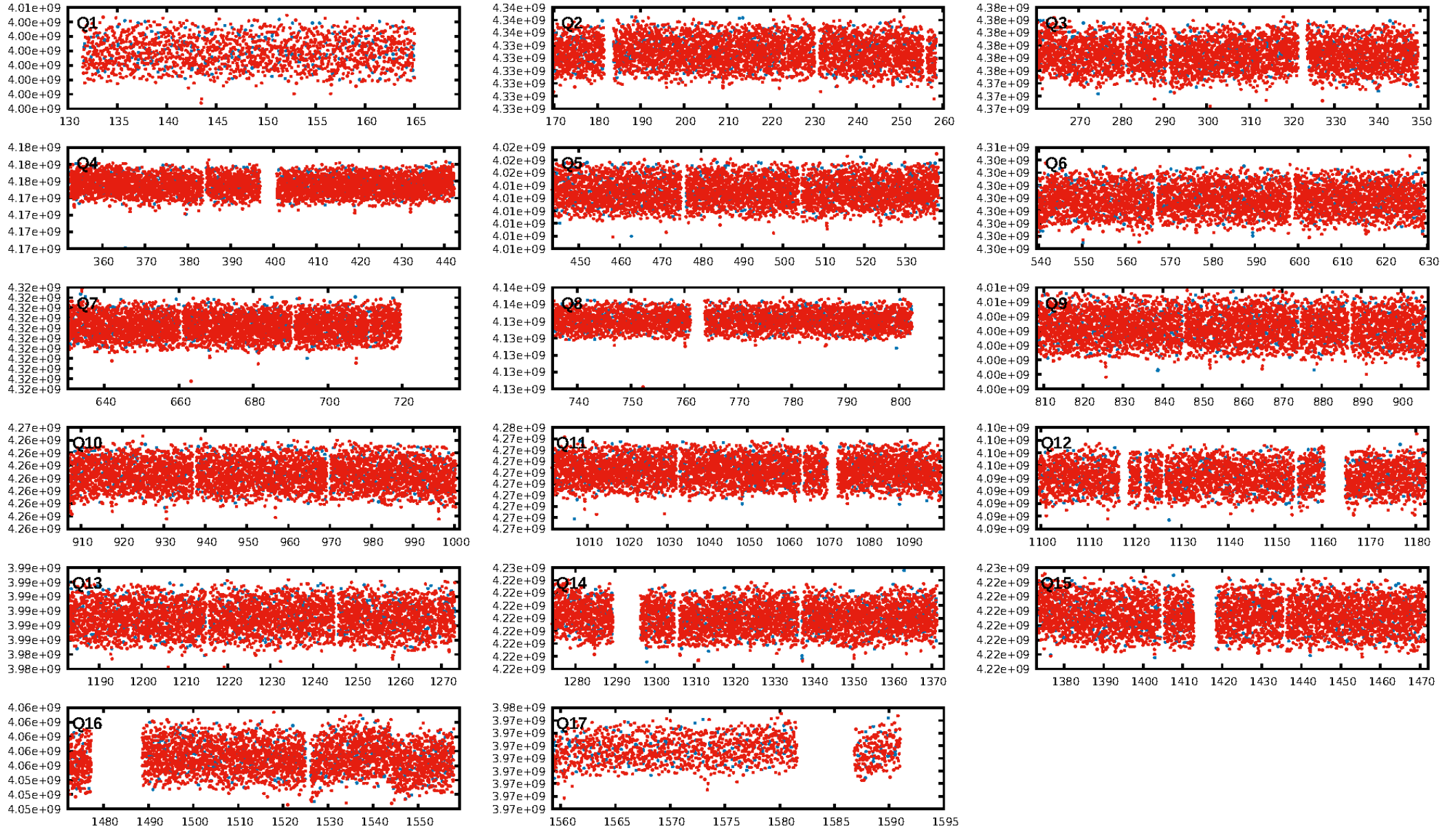
DV Fit Results:

Period = 0.67730 [0.00001] d
Epoch = 132.0076 [0.0041] BKJD
Rp/R* = 0.0020 [0.0008]
a/R* = 1.02 [0.08]
b = 0.50 [2.98]
Seff = N/A
Teq = N/A
Rp = 0.92 [0.45] Re
a = N/A
Ag = N/A
Teff = N/A

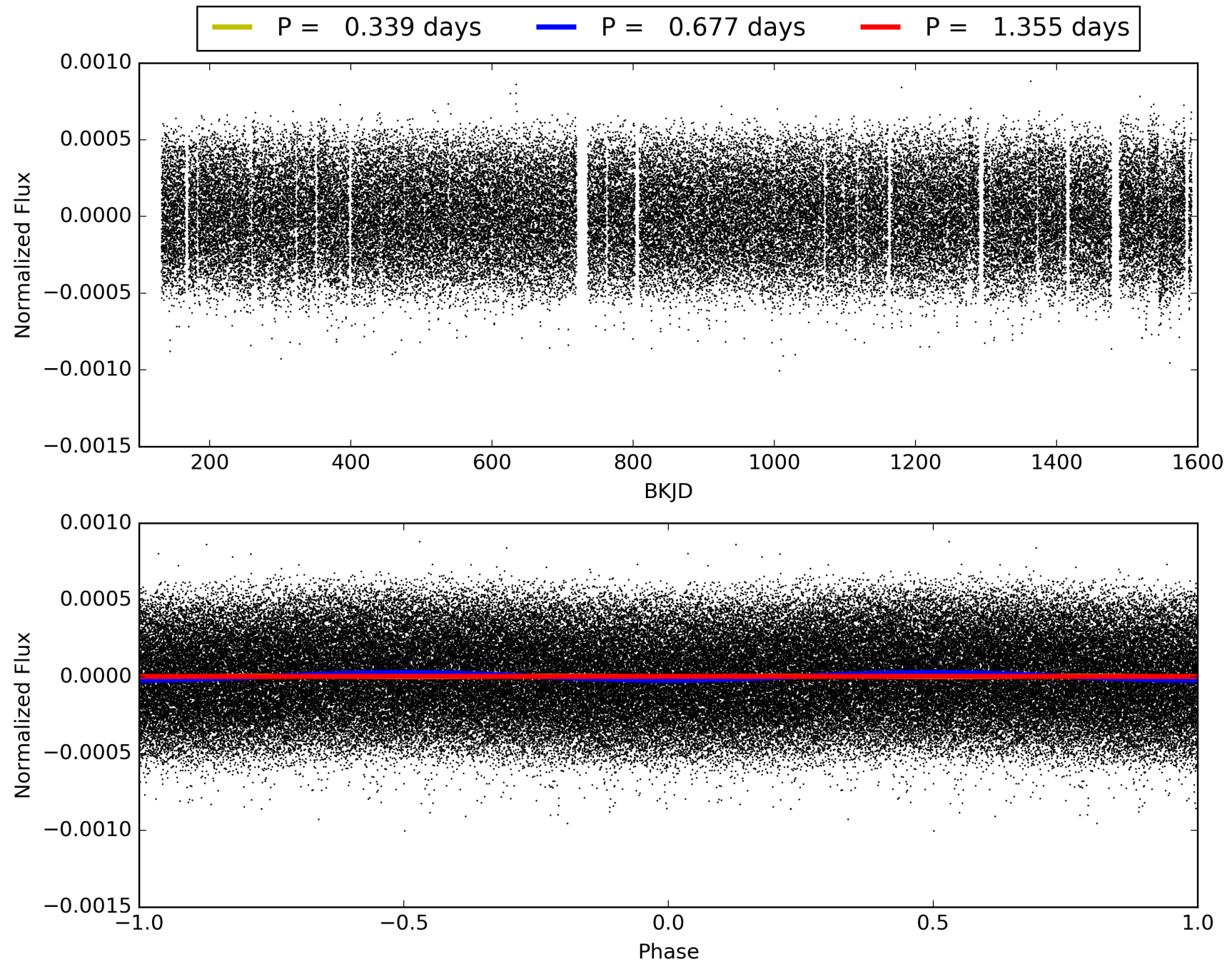
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [20.34σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1783/1783]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 23.592 arcsec [22.97σ]
KicOffset-rm: 23.586 arcsec [22.93σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011013201-03, PDC Light Curves

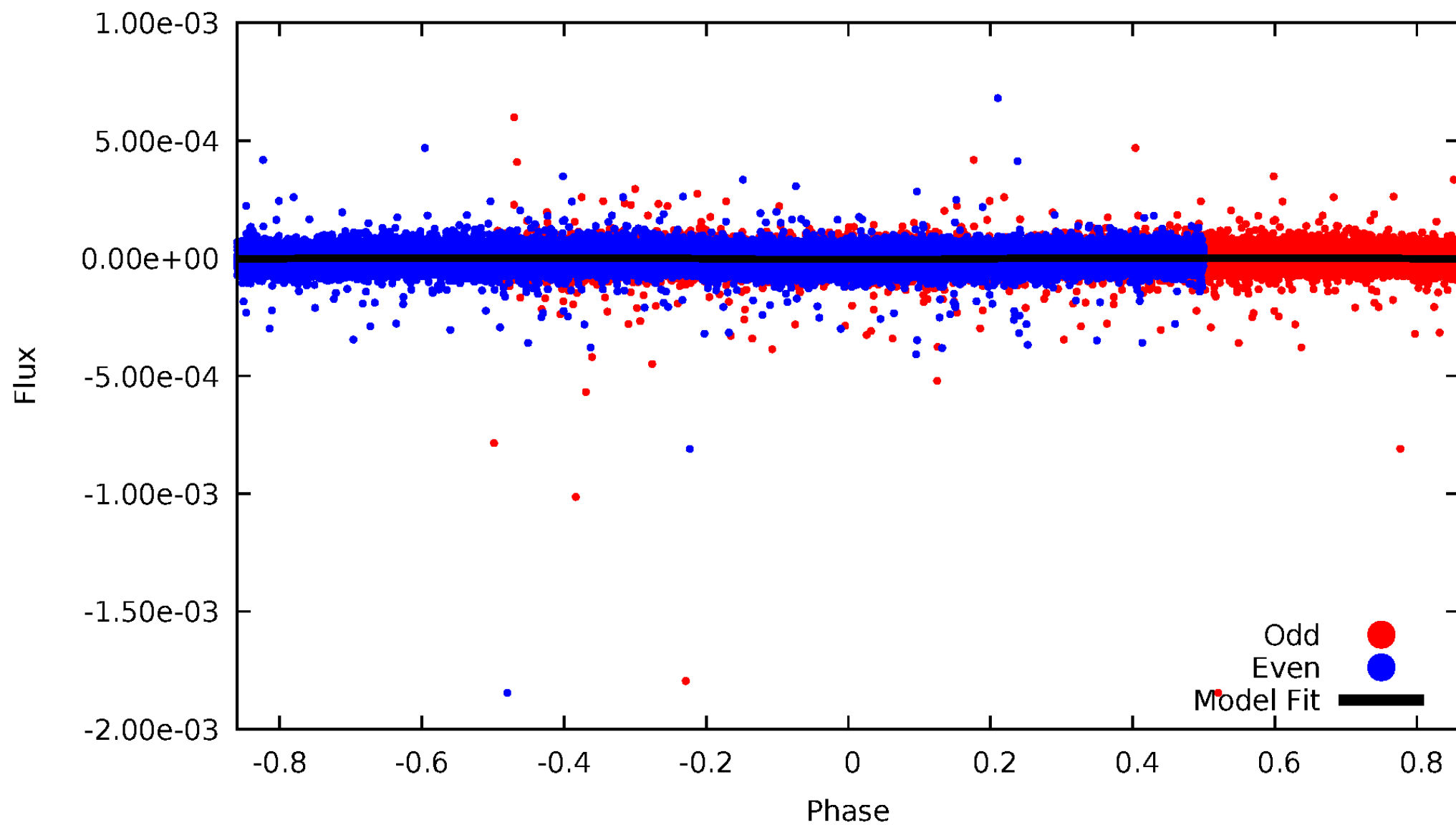


TCE 011013201-03



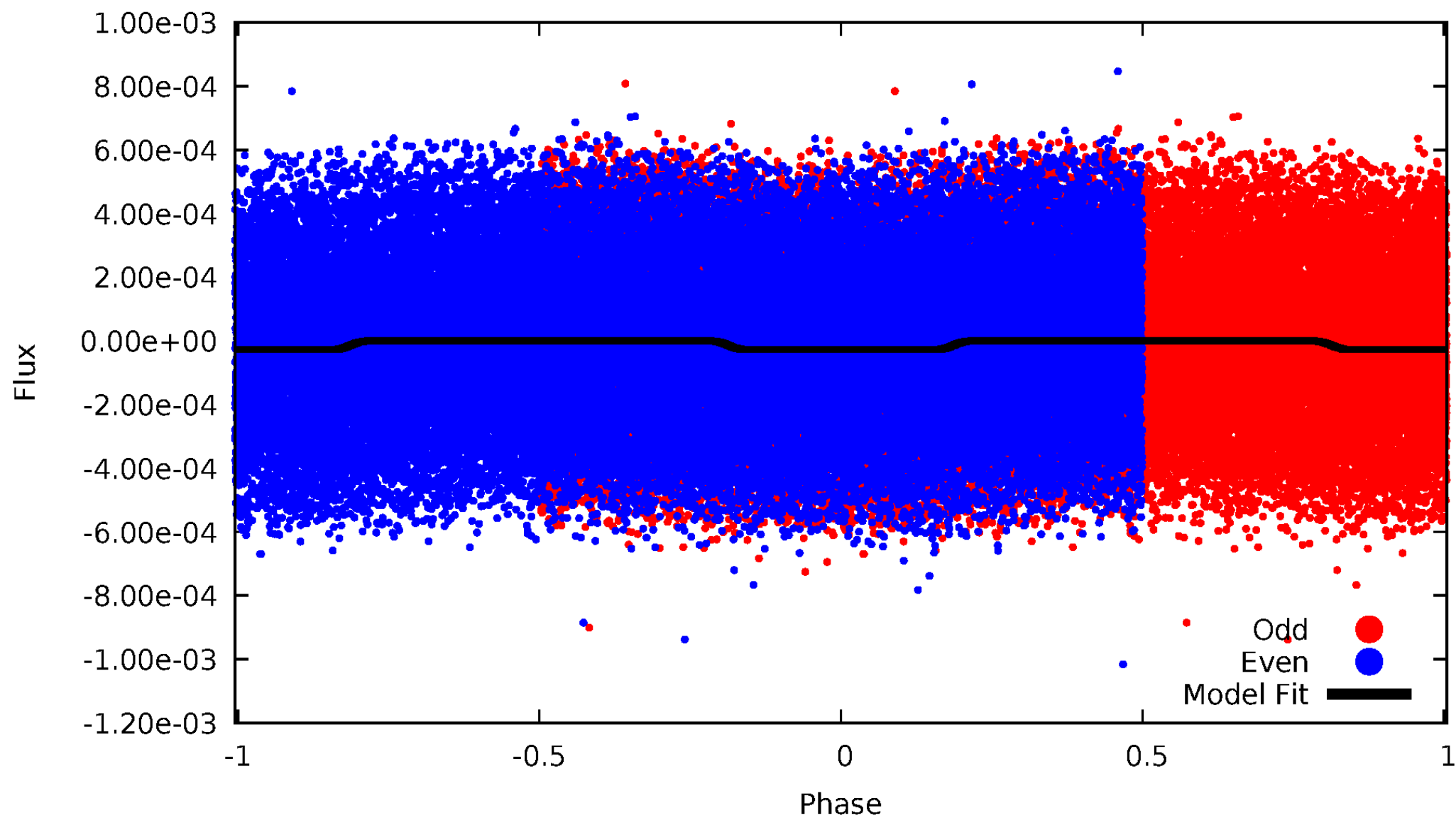
DV Odd/Even

TCE 011013201-03



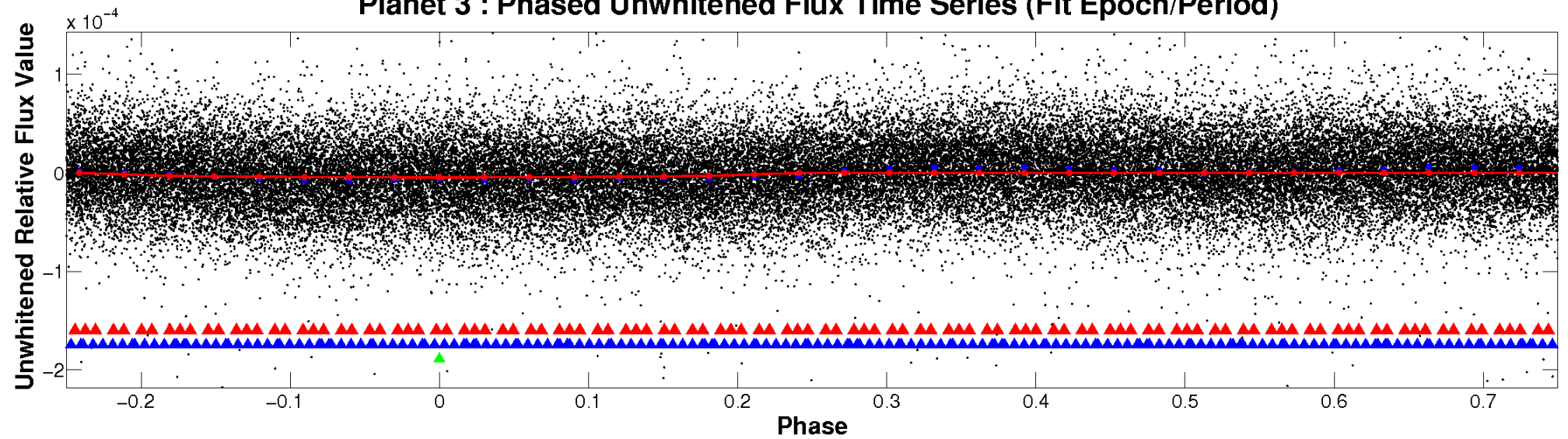
ALT Odd/Even

TCE 011013201-03

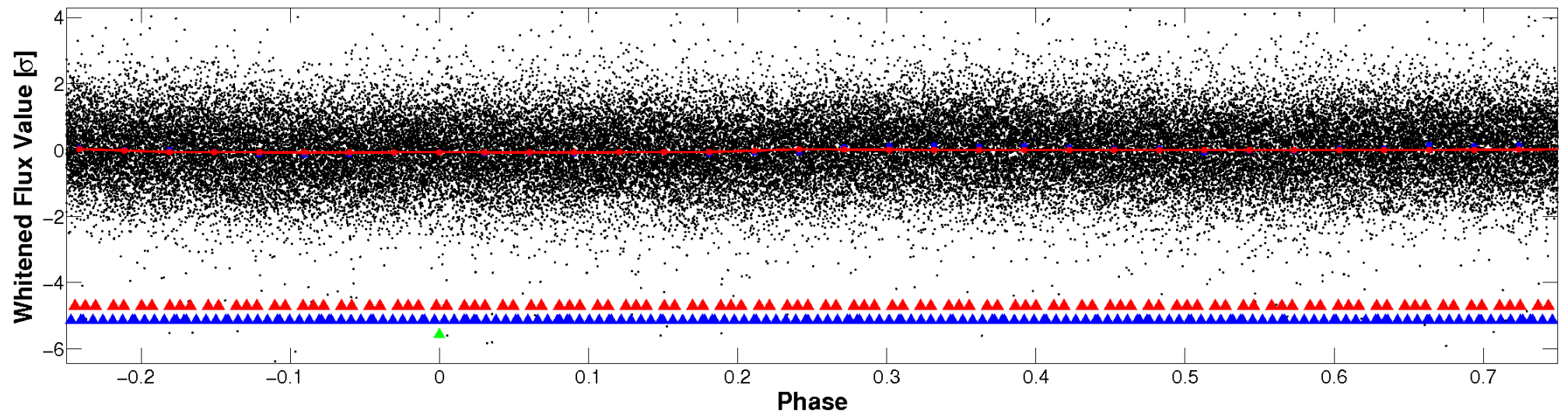


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

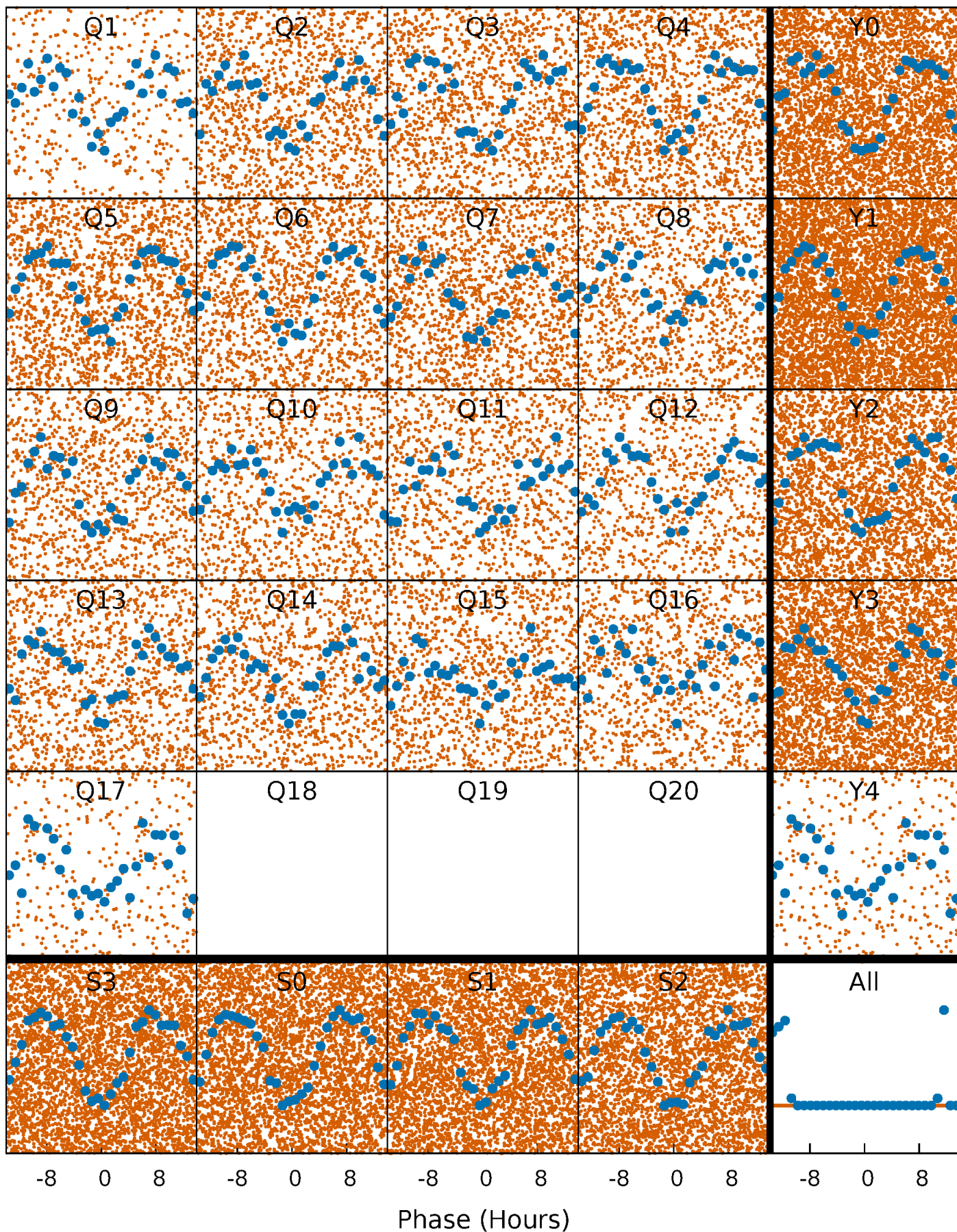


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



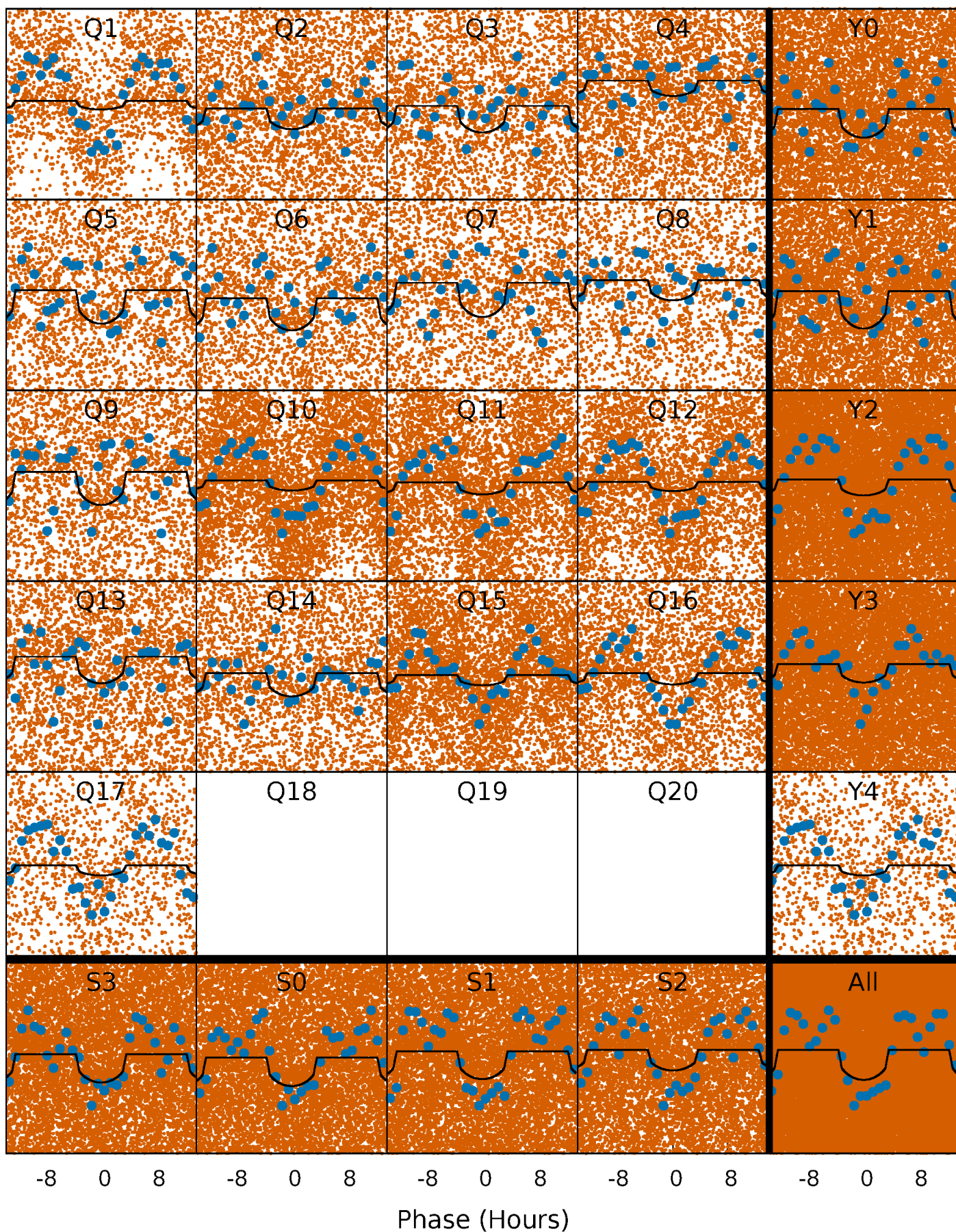
PDC Quarter-Phased Transit Curves

TCE 011013201-03 P= 0.677303 Days $T_0=132.007600$ (BKJD)



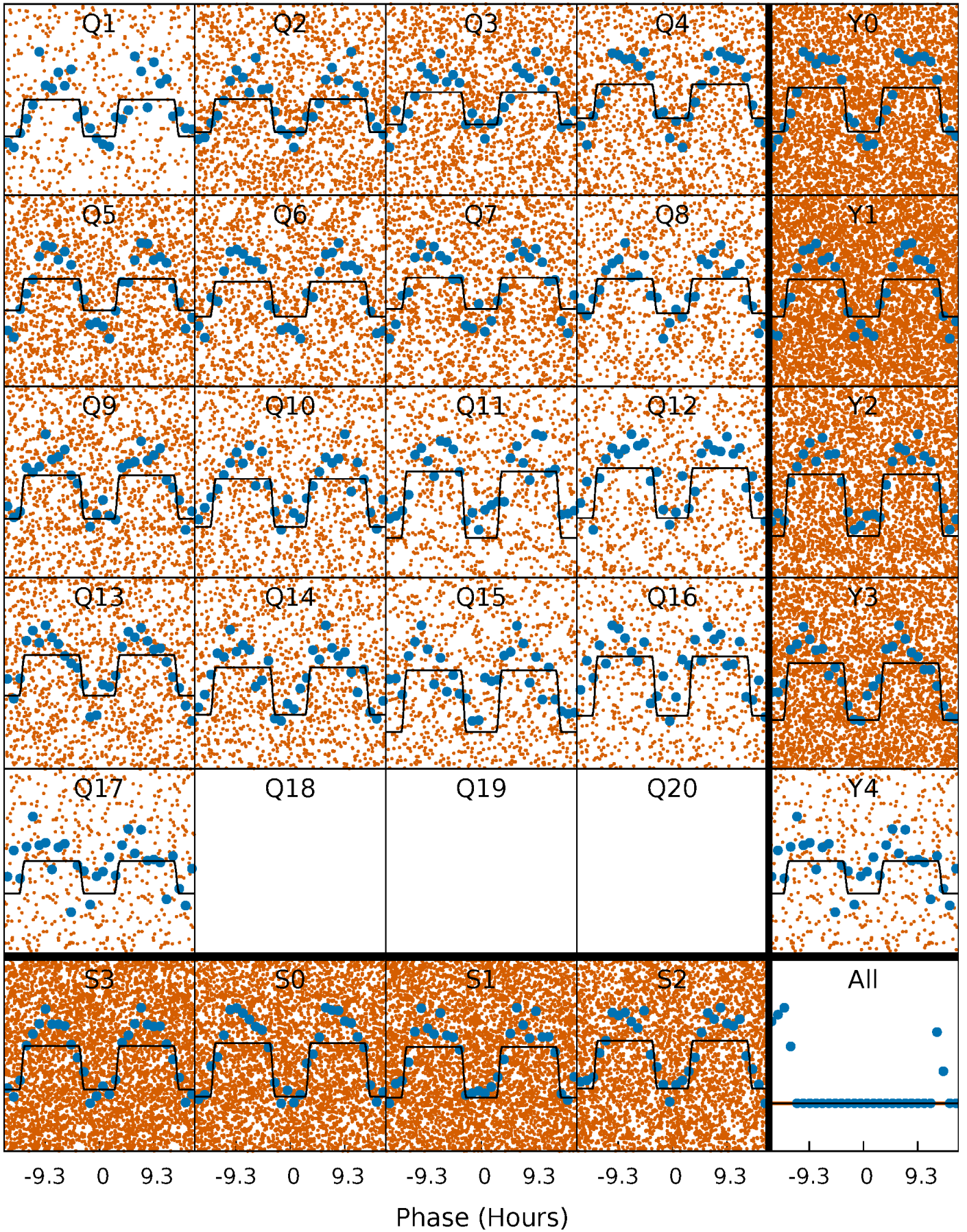
DV Quarter-Phased Transit Curves

TCE 011013201-03 P= 0.677303 Days $T_0=132.007600$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

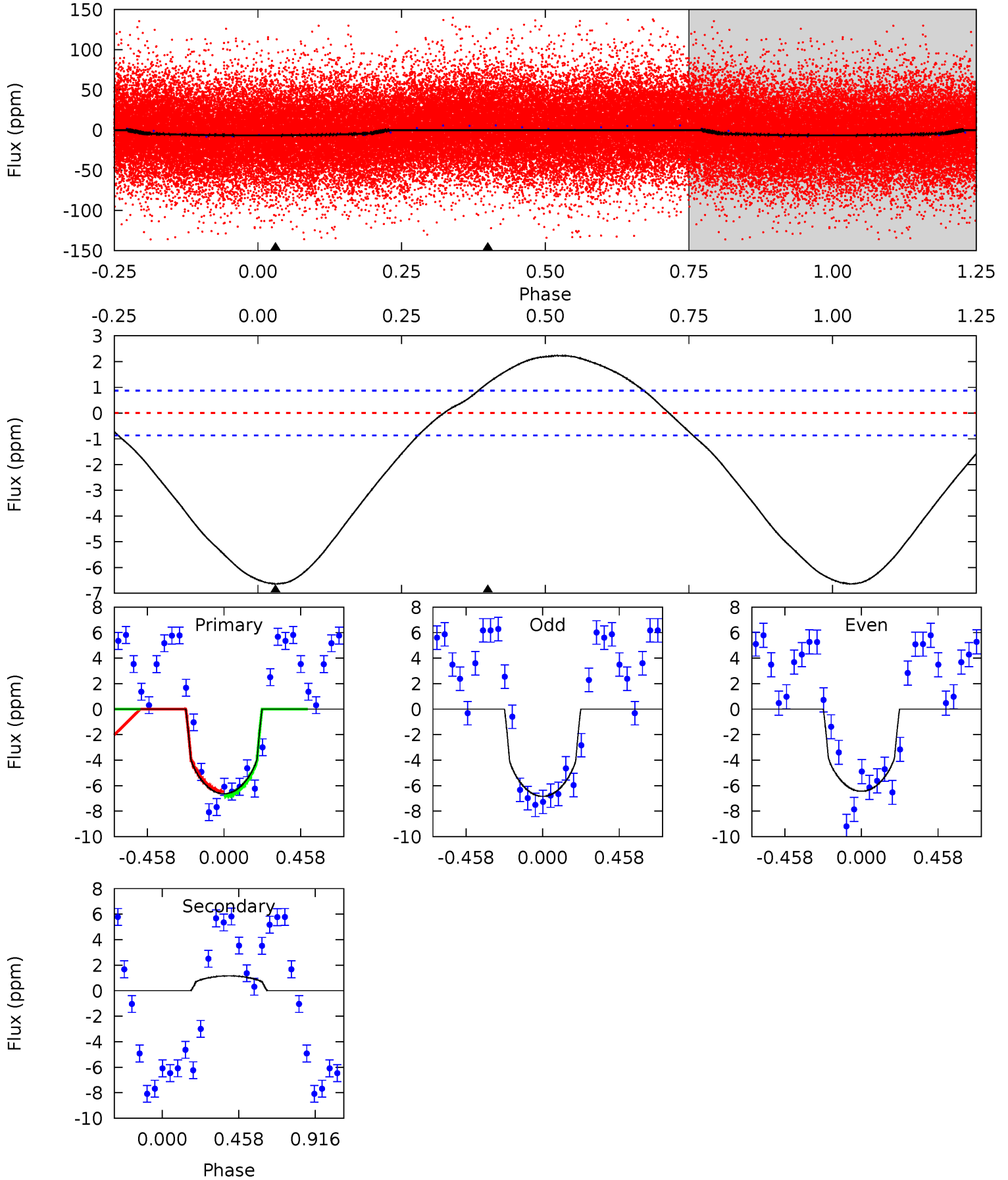
TCE 011013201-03 P= 0.677351 Days $T_0=131.967872$ (BKJD)



DV Model-Shift Uniqueness Test

011013201-03, P = 0.677303 Days, E = 131.330297 Days

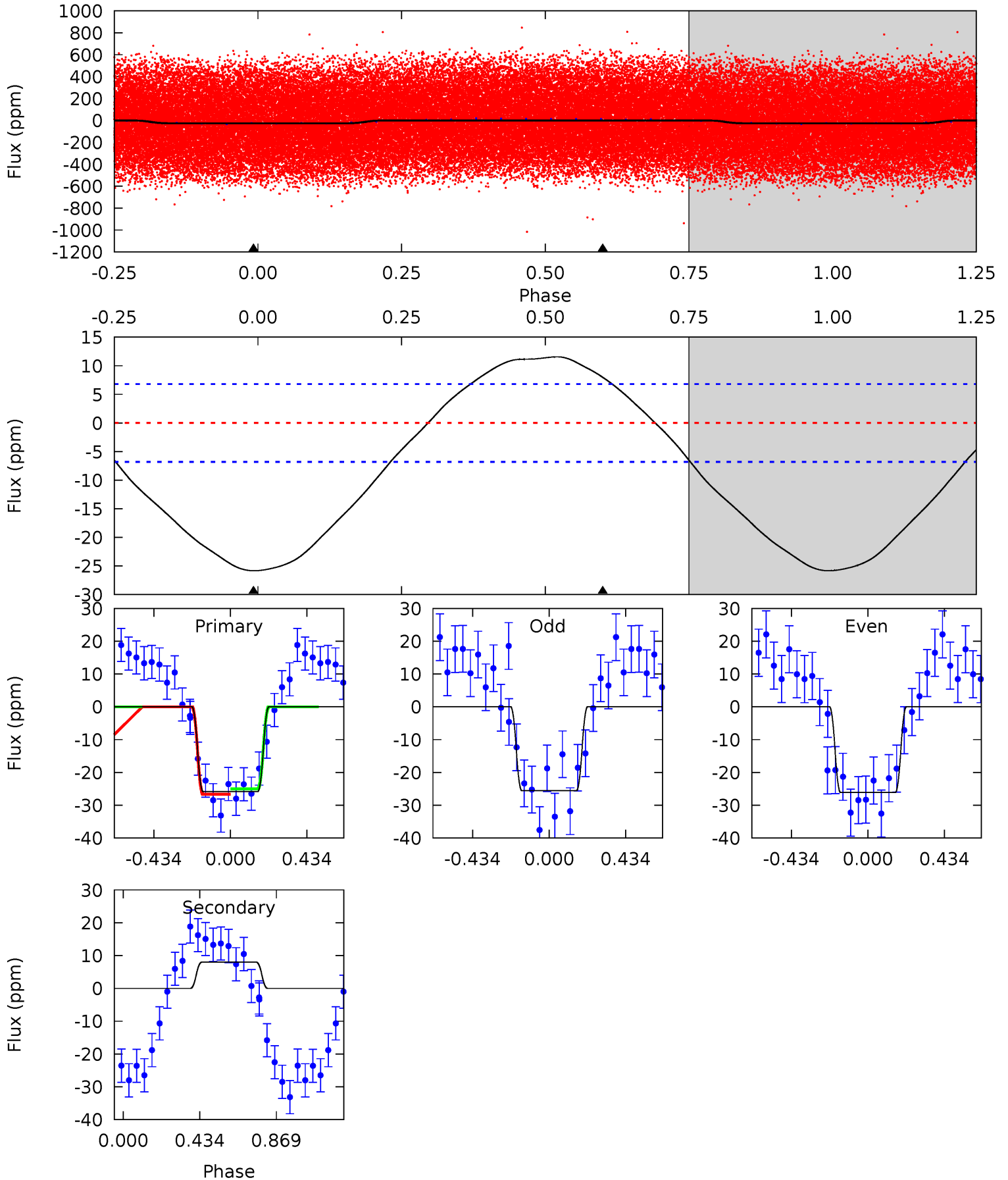
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	-5.67	0	0	4.23	0.74	2.99	32.3	32.3	-5.67	-5.67	0.97	1.04	0.25	0.88



Alt Model-Shift Uniqueness Test

011013201-03, P = 0.677351 Days, E = 131.290521 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	-4.98	0	0	4.25	0.78	1.93	16.2	16.2	-4.98	-4.98	0.19	0.98	0.31	0.52



Stellar Parameters For KIC 011013201

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7221^{+114}_{-171}	$3.488^{+0.272}_{-0.048}$	$-0.180^{+0.150}_{-0.100}$	$4.240^{+0.227}_{-1.284}$	$2.018^{+0.029}_{-0.248}$	$0.037^{+0.065}_{-0.004}$
	+2%/-2%	+8%/-1%	+83%/-56%	+5%/-30%	+1%/-12%	+174%/-11%
Source	SPE4	SPE4	SPE4	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011013201-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 0	$0.86^{+0.35}_{-0.36}$	6527^{+241}_{-530}	-6219^{+467}_{-1249}	$-0.314^{+0.163}_{-0.620}$
Alt.	8 ± 2	$2.26^{+0.40}_{-0.40}$	6535^{+239}_{-486}	-6245^{+339}_{-380}	$-0.307^{+0.104}_{-0.162}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

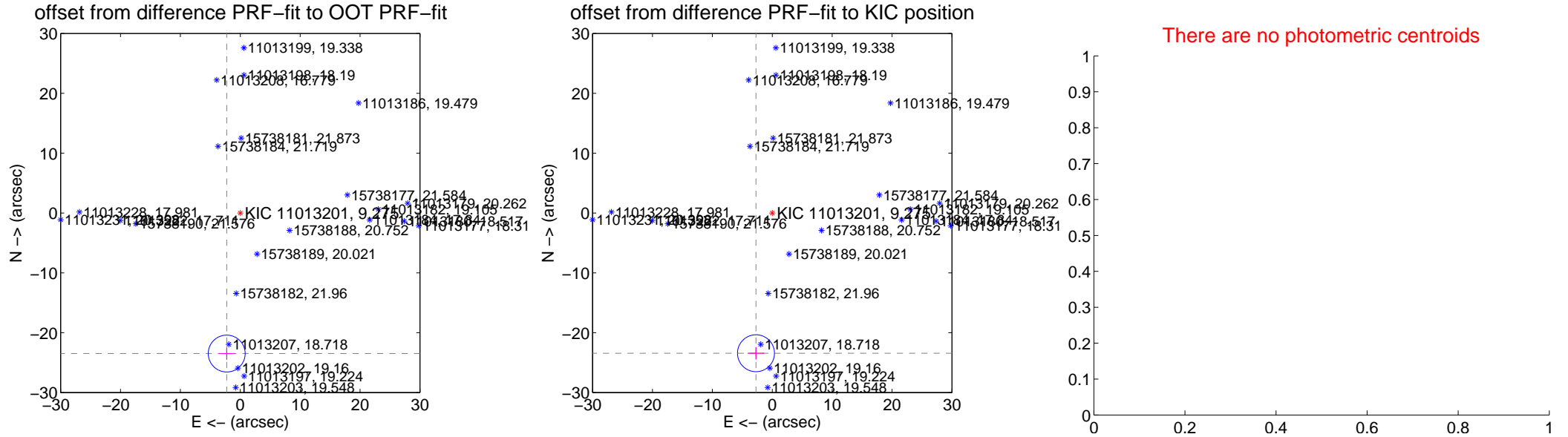
DV Centroid Data

Supplemental centroid analysis for 011013201-03. **Kepler magnitude: 9.28.** Transit SNR 10.83

There are 0 quarters with good PRF difference image offsets

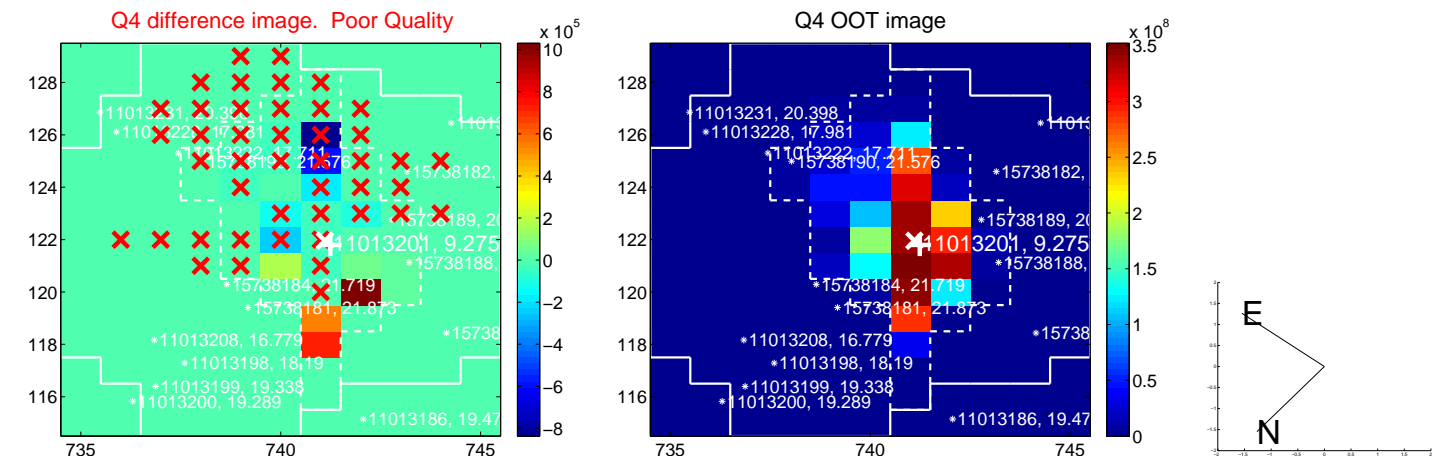
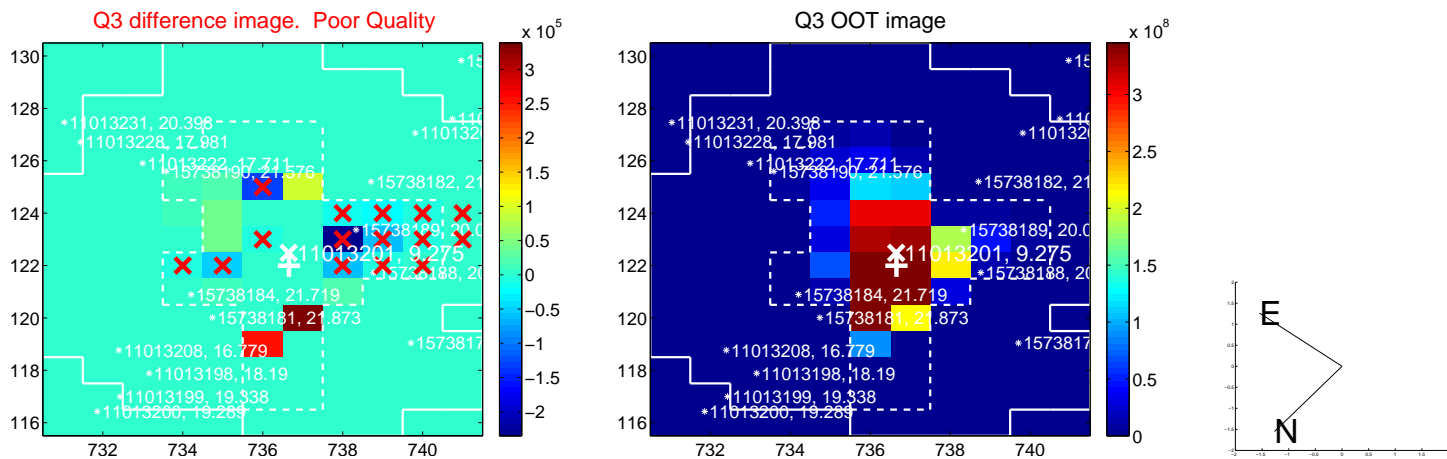
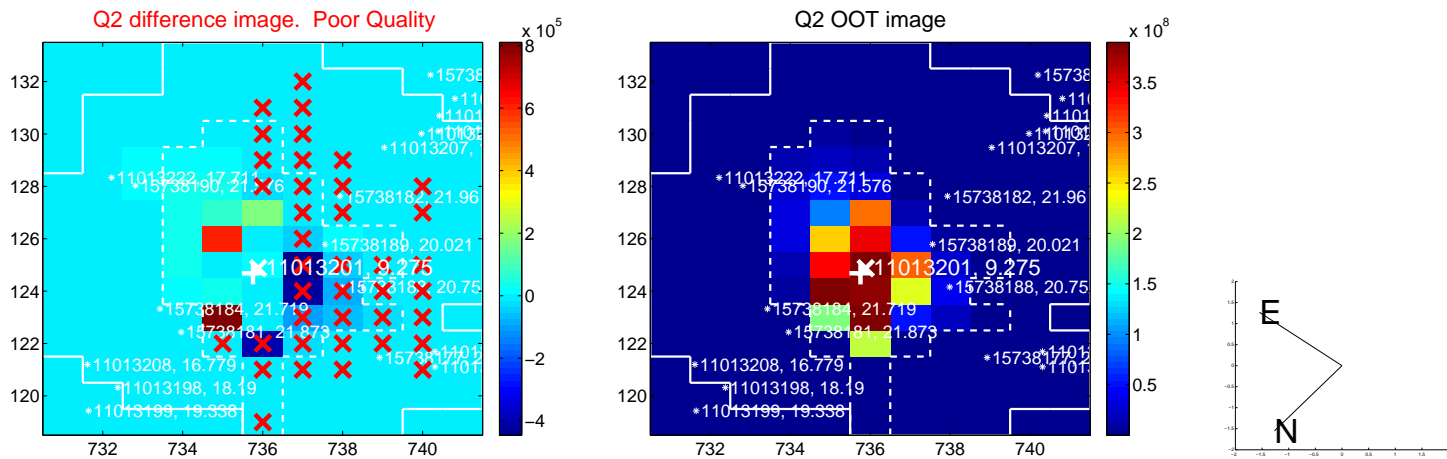
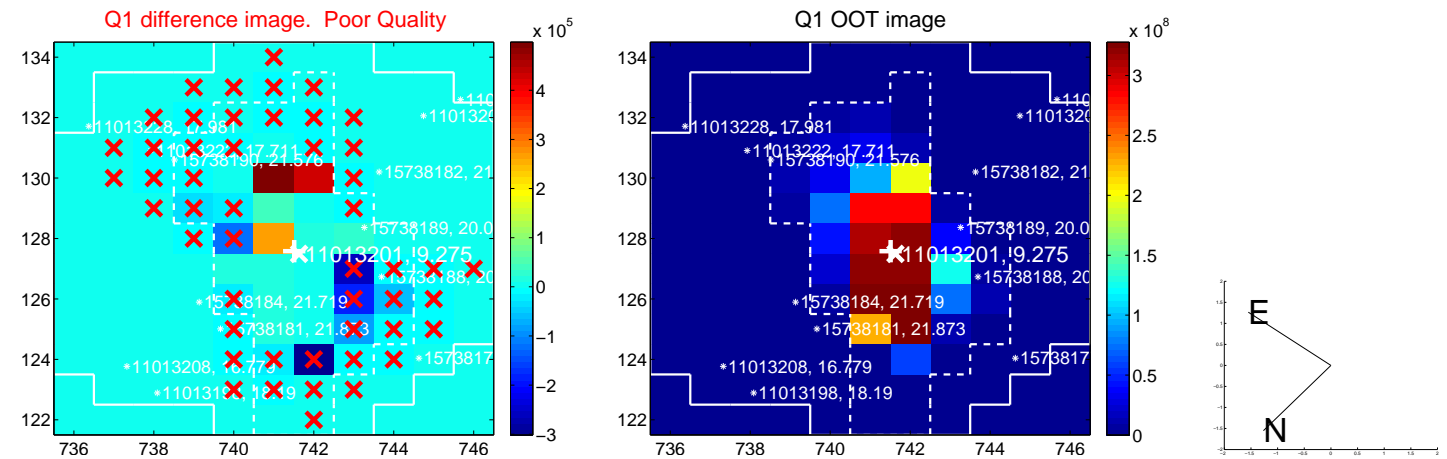
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	23.592 \pm 1.027	22.97	2.267 \pm 1.368	-23.483 \pm 1.023
PRF-fit source offset from KIC position	23.586 \pm 1.029	22.93	2.718 \pm 1.368	-23.429 \pm 1.023
photometric centroid source offset	—	—	—	—

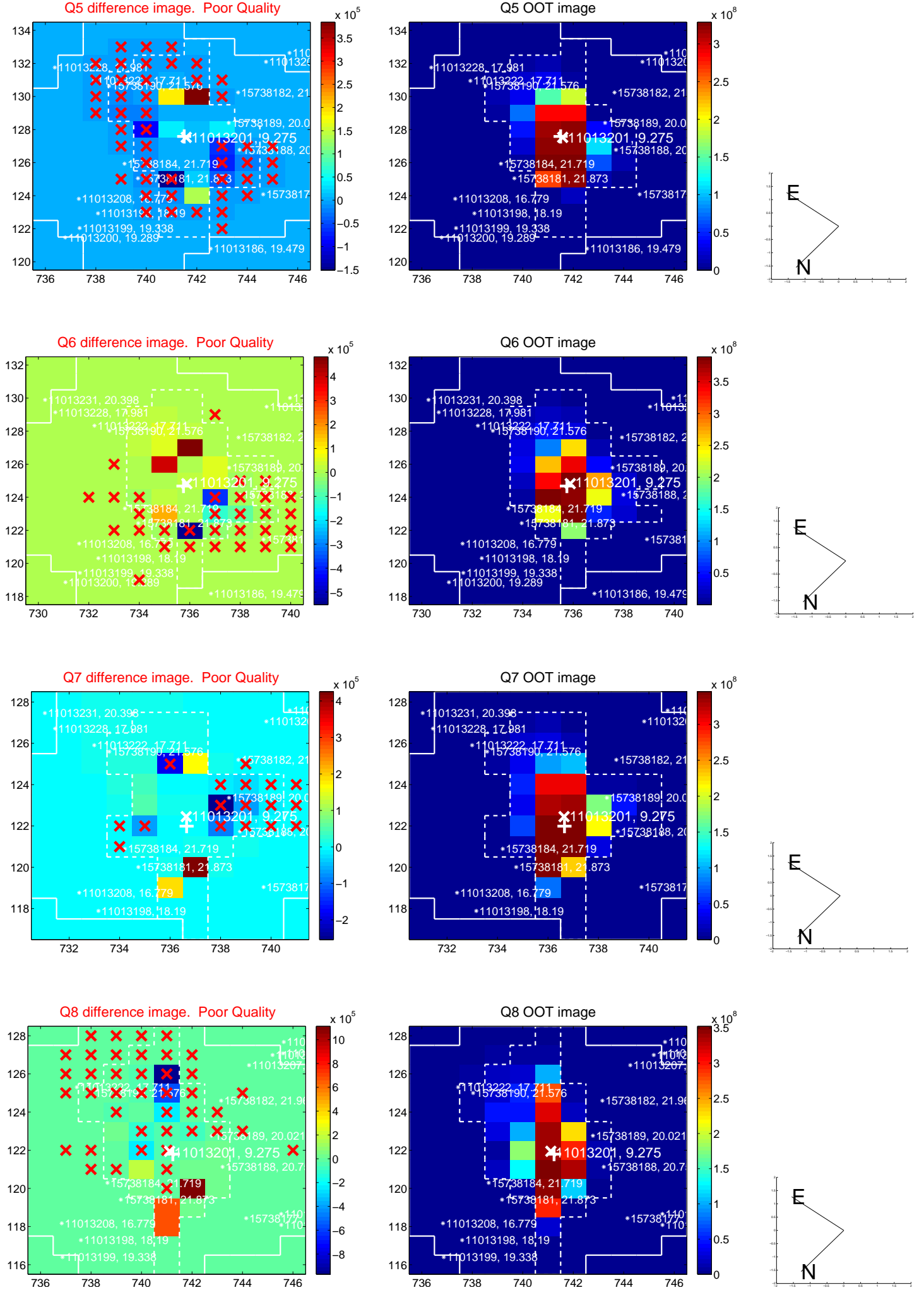


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

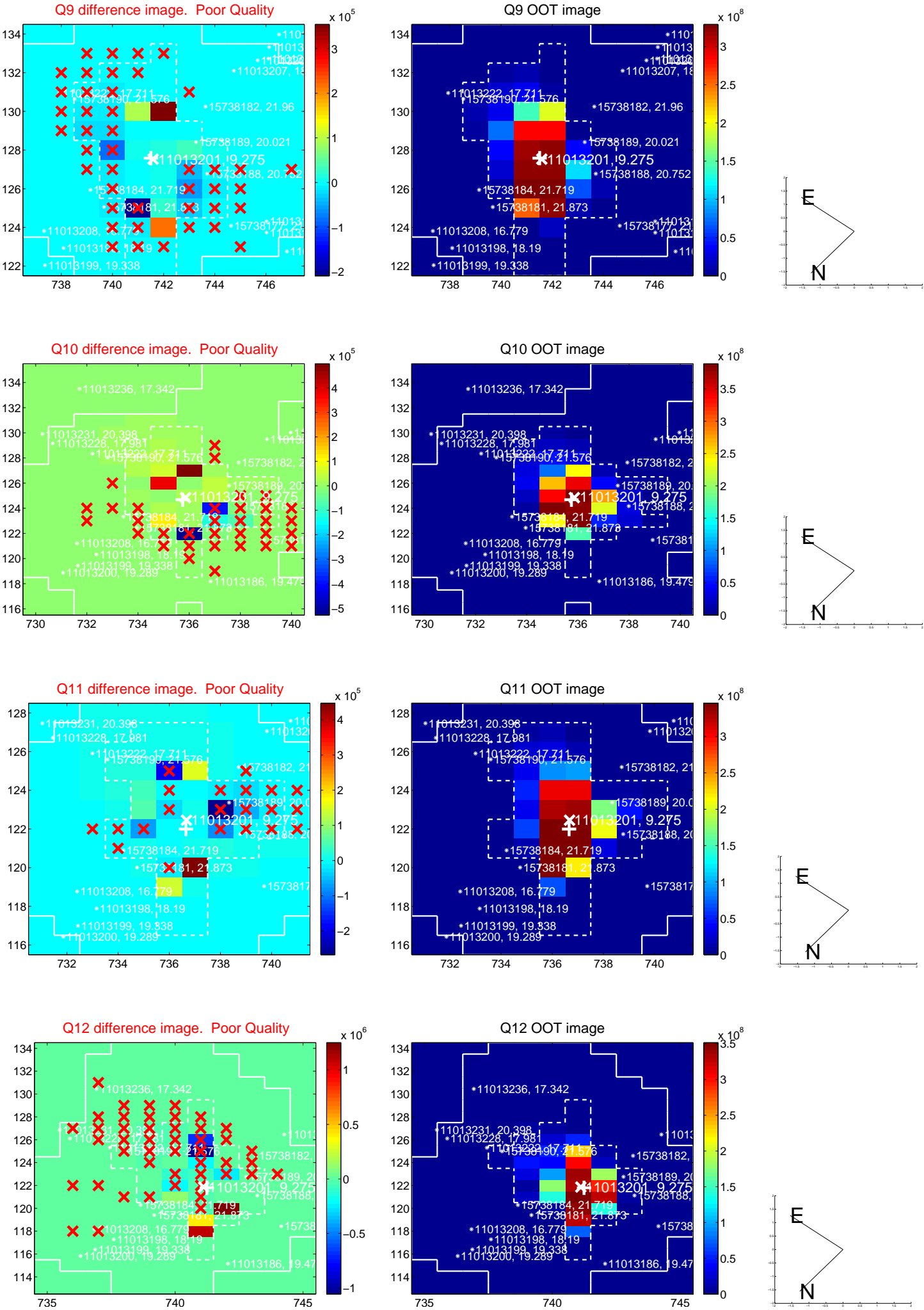
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



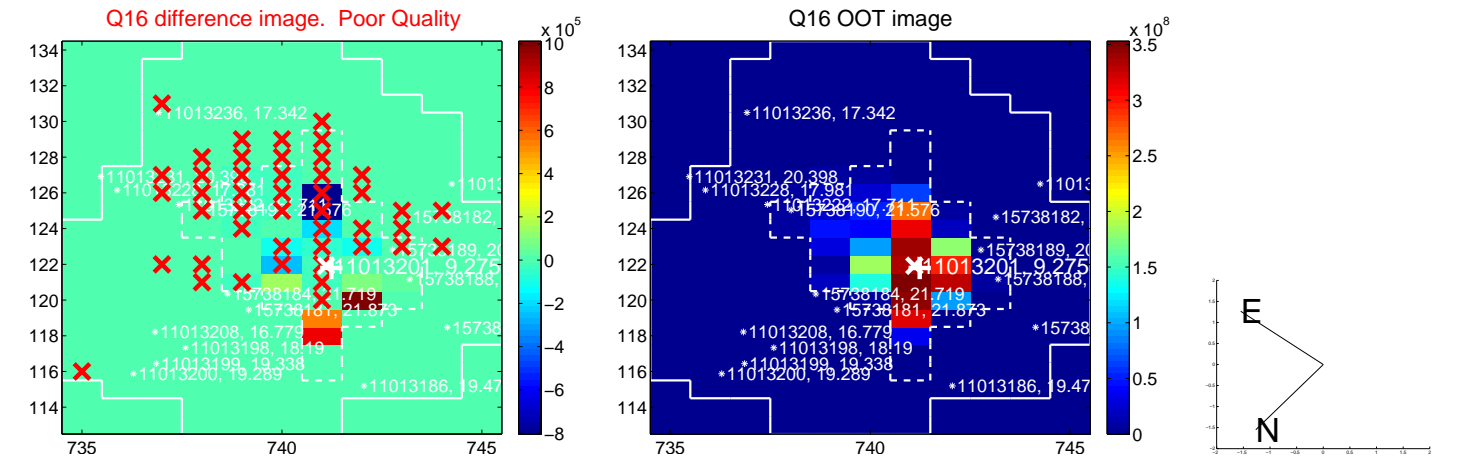
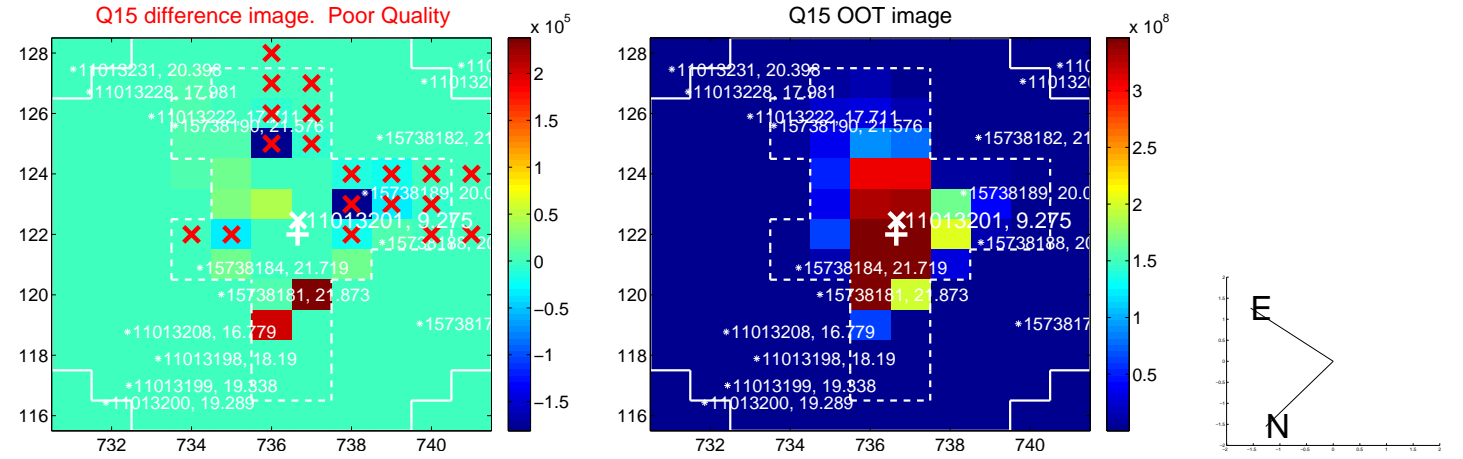
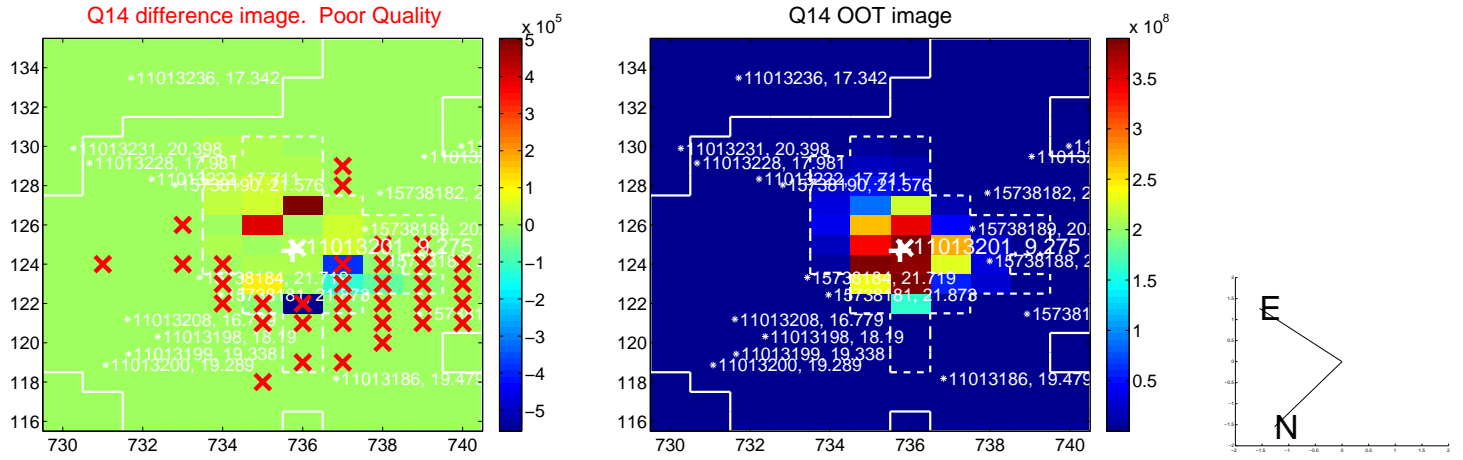
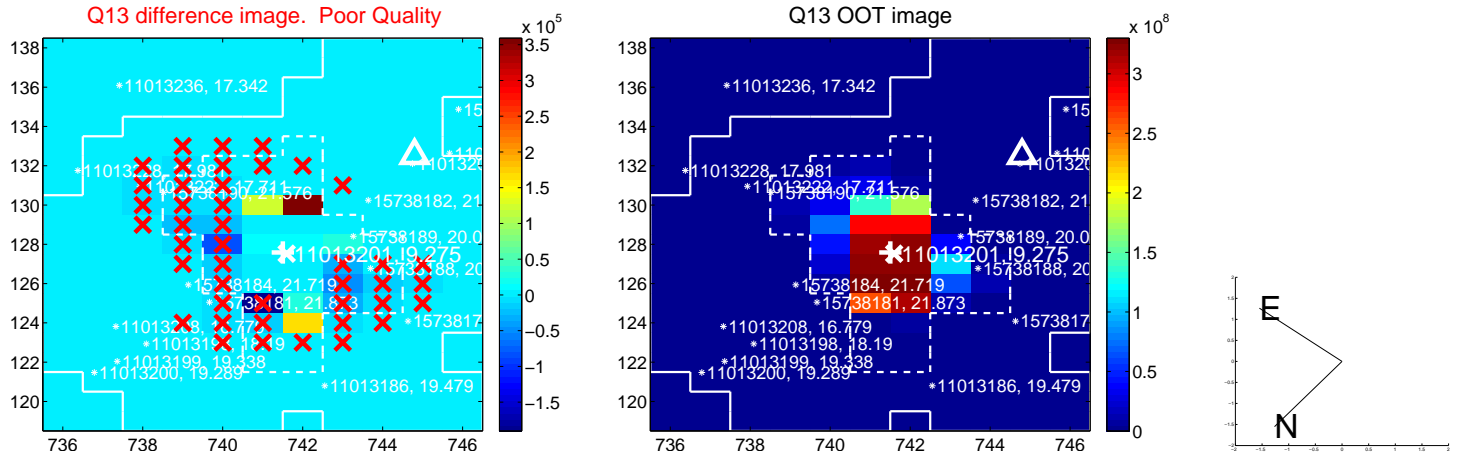
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



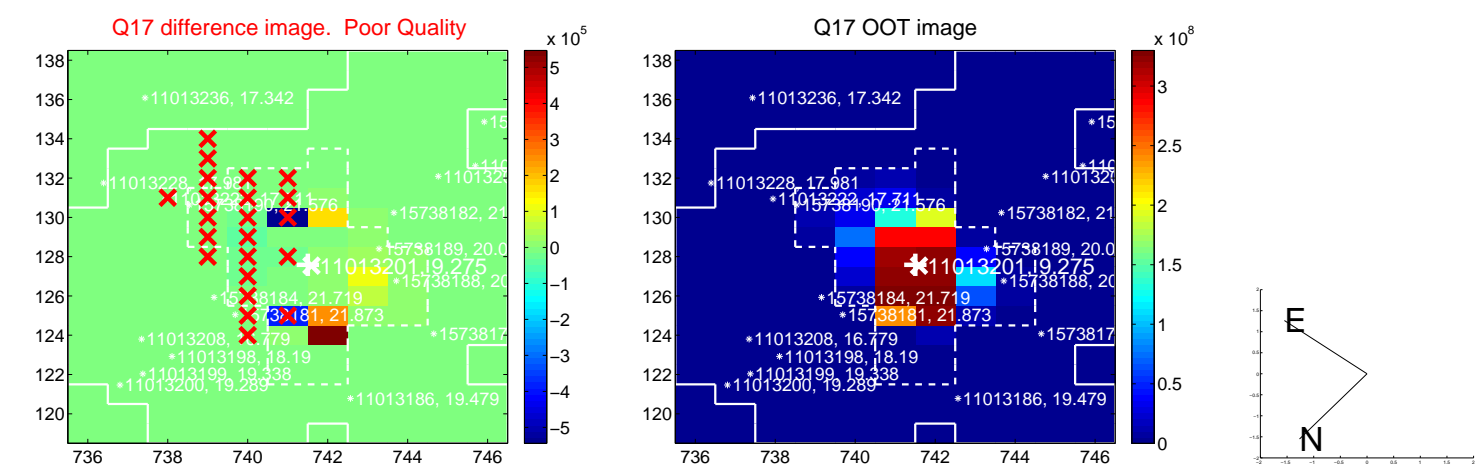
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

